



88079048



U.S. Department of the Interior
Bureau of Land Management

Oregon State Office
P.O. Box 2965
Portland, Oregon 97208

December 1993



An Analysis of the Socioeconomic Effects of Bureau of Land Management Resource Management Plans in Western Oregon

Report prepared by – Catherine Woods Richardson

Institute for Resources in Society
College of Forest Resources, AR-10
University of Washington
Seattle, WA 98195

HC
107
.07
R53
1993

ACKNOWLEDGMENTS

Dr. Margaret Simpson supervised this study at the Institute for Resources in Society, assisting in research design, literature review, and critique of outline and draft. Leslie Frewing-Ryan and Dale Rapp of the U.S. Forest Service, Pacific Northwest Research Station in Portland provided invaluable knowledge, advice, and advice on using economic and demographic data. A host of BLM district managers worked as fieldwork for this study, by organizing my visits to districts, participating in focus groups, and providing additional information and advice for this work. Individuals who I

AN ANALYSIS OF THE SOCIOECONOMIC EFFECTS OF BUREAU OF LAND MANAGEMENT

University of Washington answered occasional requests for assistance in locating reports and in clarifying some questions I encountered during data analysis. Bruce Butler provided administrative support at the

RESOURCE MANAGEMENT PLANS IN WESTERN OREGON

Wendy Anderson and John Christensen of the USFS Forest Research Station, Dr. Kirk Johnson of the Northwest Policy Center at the University of Washington, and Dr. Matthew Carroll at Washington State University. While all these people contributed to this study in invaluable ways, any errors or omissions remain my own.

A Report to the U.S. Department of Interior, Bureau of Land Management, Oregon State Office

December 1993

Catherine Woods Richardson

Institute for Resources in Society
College of Forest Resources, AR-10
University of Washington
Seattle, WA 98195

BLM Library
Denver Federal Center
Bldg. 85, OC-521
P.O. Box 25047
Denver, CO 80225

ACKNOWLEDGEMENTS

Dr. Margaret Shannon supervised this study at the Institute for Resources in Society, assisting in research design, literature review, and critiques of outlines and drafts. Leslie Frewing-Runyon and Dale Bays at the BLM State Office in Portland helped to keep this project on track, in content and administration. Wendy McGinnis of the U.S. Forest Service Pacific Northwest Research Station in Portland provided invaluable assistance locating and advice on using economic and demographic data. A host of BLM district employees assisted in fieldwork for this study, by organizing my visits to districts, participating in focus groups, and contributing additional information and advice for this work. Individuals who I interviewed in each district also went out of their way to be of assistance. Dr. Robert G. Lee of the University of Washington answered occasional requests for assistance in locating reports and in clarifying some questions I encountered during data analysis. Hanna Anders provided administrative support at the Institute. Reviewers of a draft of this report included BLM staff in the State Office and district offices, Wendy McGinnis and Chris Christensen of the USFS PNW Research Station, Dr. Kirk Johnson of the Northwest Policy Center at the University of Washington, and Dr. Matthew Carroll at Washington State University. While all these people contributed to this work in invaluable ways, any errors or omissions remain my own.

TABLE OF CONTENTS

List of figures	v
List of tables	vi
Executive summary	viii
Organization of this report	xii
Introduction: How and why this study was done	
Background for this analysis	1
Social analysis in resource management	3
Sources for this analysis	4
Socioeconomic aspects of forest management in western Oregon	
Rural and urban values, perceptions, and cultures	6
Community stability	11
Power and participation in resource management	16
Western Oregon analysis	
Population	21
Employment and income	27
Business and industry	33
County revenues, infrastructure, and services	37
Stakeholders	41
Coos Bay District analysis	
Population	54
Employment and income	58
Business and industry	59
County revenues, infrastructure, and services	61
Stakeholders	62
Eugene District analysis	
Population	72
Employment and income	74
Business and industry	76
County revenues, infrastructure, and services	77
Stakeholders	77
Klamath Falls Resource Area analysis	
Population	89
Employment and income	91
Business and industry	92
County revenues, infrastructure, and services	93
Stakeholders	94

Medford District analysis	
Population	103
Employment and income	104
Business and industry	108
County revenues, infrastructure, and services	109
Stakeholders	110
Roseburg District analysis	
Population	120
Employment and income	122
Business and industry	123
County revenues, infrastructure, and services	125
Stakeholders	126
Salem District analysis	
Population	134
Employment and income	135
Business and industry	149
County revenues, infrastructure, and services	151
Stakeholders	153
Conclusion: RMP benefits and opportunities for mitigation	
Socioeconomic benefits of the RMP	160
Opportunities for districts to mitigate negative effects	161
Meeting district information needs	164
References	166

LIST OF FIGURES

1.	Unemployment rates for Coos and Curry counties	57
2.	Unemployment rates for Lane County	73
3.	Unemployment rates for Klamath County	90
4.	Unemployment rates for Jackson and Josephine counties	106
5.	Unemployment rates for Douglas County	121
6.	Unemployment rates for Clackamas and Multnomah counties.	142
7.	Unemployment rates for Washington and Benton counties	143
8.	Unemployment rates for Linn and Marion counties	144
9.	Unemployment rates for Polk and Yamhill counties	145
10.	Unemployment rates for Clatsop and Columbia counties	146
11.	Unemployment rates for Lincoln and Tillamook counties	147
10.	Fish and wildlife management activities on BLM lands in western Oregon	46
11.	Infrastructure and water supply uses of BLM lands in western Oregon	47
12.	Illegal uses of BLM lands in western Oregon	48
13.	Other commercial and management activities on BLM lands in western Oregon	48
14.	Recreational uses of western Oregon BLM lands	51
15.	Cultural, educational, scientific or spiritual resources and activities on BLM lands in western Oregon	52
16.	Federally recognized Indian tribes with interests in the western Oregon planning area	53
17.	Demographic data for Coos and Curry counties	56
18.	Income data for Coos and Curry counties	56
19.	Waterborne commerce in Coos Bay for 1994	60
20.	Human uses of Coos Bay Oregon BLM lands: results of August 1993 boat survey	63
21.	Demographic data for Lane County	73
22.	Income data for Lane County	73
23.	Human uses of Eugene-Pleasant Hill BLM lands: results of August 1993 boat survey	80
24.	Demographic data for Klamath County	90
25.	Income data for Klamath County	90
26.	Human uses of Klamath River National Forest BLM lands: results of July 1993 boat survey	97
27.	Demographic data for Jackson and Josephine counties	107

LIST OF TABLES

1.	Sample expressions of basic values for people with different understandings of nature	10
2.	Types of forest-dependent communities in the Pacific Northwest	12
3.	Some socioeconomic factors that are thought to affect community stability	15
4.	Purposive styles of citizen participation	17
5.	Severely affected communities in western Oregon	22
6.	Summary of SWOT analyses for 13 Severely Affected Communities in western Oregon	36
7.	County expenditures and county revenues from forests in public ownership, fiscal year 1991	38
8.	Timber management activities on western Oregon BLM lands	42
9.	Special forest products collected from western Oregon BLM lands	44
10.	Fish and wildlife management activities on BLM lands in western Oregon	46
11.	Infrastructure and water supply uses of BLM lands in western Oregon	47
12.	Illegal uses of BLM lands in western Oregon	48
13.	Other commercial and management activities on BLM lands in western Oregon	49
14.	Recreational uses of western Oregon BLM lands	51
15.	Cultural, educational, aesthetic or spiritual resources and activities on BLM lands in western Oregon	52
16.	Federally recognized Indian tribes with interests in the western Oregon planning area	53
17.	Demographic data for Coos and Curry counties	56
18.	Income data for Coos and Curry counties	56
19.	Waterbourne commerce in Coos Bay for 1992	60
20.	Human uses of Coos Bay District BLM lands: results of August 1993 focus group	65
21.	Demographic data for Lane County	73
22.	Income data for Lane County	73
23.	Human uses of Eugene District BLM lands: results of August 1993 focus group	80
24.	Demographic data for Klamath County	90
25.	Income data for Klamath County	90
26.	Human uses of Klamath Falls Resource Area BLM lands: results of July 1993 focus group	97
27.	Demographic data for Jackson and Josephine counties	107

28.	Income data for Jackson and Josephine counties	107
29.	Human uses of Medford District BLM lands; results of August 1993 focus group	113
30.	Demographic data for Douglas County	121
31.	Income data for Douglas County	121
32.	Human uses of Roseburg District BLM lands; results of July 1993 focus group	128
33.	Demographic data for counties in the Salem District	138
34.	Income data for counties in the Salem District	140
35.	Human uses of Salem District BLM lands; results of July 1993 focus group	156

EXECUTIVE SUMMARY

The purpose of this report is to answer the question "WHO IS AFFECTED BY BLM RESOURCE MANAGEMENT IN WESTERN OREGON, AND HOW ARE THEY AFFECTED?" Although the question is simple, a complete answer must consider many interacting social and economic processes, and, fundamentally, peoples' relationships with self, one another, the BLM and other institutions, and the environment.

Who is affected by BLM management?

People who are affected by BLM management on its western Oregon lands include 1) people who directly use the lands, 2) people who use natural resources that are affected by management of the lands (e.g., timber, fish, and water), and 3) people who care about management of the lands. Given global trade in forest products and national and international interest in Northwest forest management in recent years, **PEOPLE ACROSS THE NATION AND THE GLOBE ARE AFFECTED BY BLM MANAGEMENT IN WESTERN OREGON.**

In general, local residents of BLM districts receive the greatest quantity of tangible and intangible benefits from BLM lands. Thus, **LOCAL RESIDENTS ARE MOST LIKELY TO BE STRONGLY AFFECTED, POSITIVELY AND NEGATIVELY, BY CHANGES IN BLM RESOURCE MANAGEMENT PRACTICES.** The direction and intensity of the effects will vary with individuals' personal uses and values for the lands.

How are they affected?

People are affected in many aspects of their lives: as workers, as members of families and communities, as consumers, and in their relationships with other people and the environment.

The effects of BLM management on people occur in the context of existing socioeconomic processes. The BLM has little control over many of these processes, but these processes can both magnify and reduce the intensity of the BLM's socioeconomic effects.

Effects on wood products workers and industries

A person's work can provide both income and an important source of identity; thus **THE LOSS OF EMPLOYMENT CAN BRING ECONOMIC AND PSYCHOLOGICAL HARDSHIP TO INDIVIDUALS, THEIR FAMILIES, AND THEIR COMMUNITIES.** Unemployment in the western Oregon timber wood products industries in the 1980s and 1990s has had these effects, and the timber harvest levels proposed in the RMP Preferred Alternatives will support lower levels of employment in western Oregon wood products industries than were supported by harvests in the 1980s.

THE CAUSES OF JOB LOSSES IN WESTERN OREGON WOOD PRODUCTS INDUSTRIES OVER THE PAST DECADE ARE MULTIPLE, and include recessions in the early 1980s and 1990s, changes in worker productivity, and court injunctions on timber sales from federal lands. Although workers in the industry have adapted to fluctuating employment caused by economic and business cycles,

job losses caused by changing federal policies appear to be permanent, rather than temporary in nature. For people who do not believe that reductions in federal harvest levels are warranted, current and projected unemployment in the wood products industries is a source of great distress.

The interacting factors that are contributing to job losses in the wood products industry make it difficult to measure the specific effects of BLM management. However, **THE HIGH VISIBILITY OF CHANGES IN FEDERAL FOREST MANAGEMENT COMPARED WITH THESE OTHER FACTORS LEAD MANY PEOPLE TO ATTRIBUTE UNEMPLOYMENT IN THE WOOD PRODUCTS INDUSTRY SOLELY TO BLM AND U.S. FOREST SERVICE HARVEST LEVELS.**

Effects on non-timber sources of employment and income

Despite the common focus on timber in discussions of federal forests, the BLM contributes to the employment and income of western Oregon residents in many ways. **ENVIRONMENTAL QUALITY IS VITAL TO MANY ASPECTS OF OREGON'S ECONOMY**, e.g., tourism, commercial fishing and seafood processing, and the ability to attract new businesses and good workers. Retirees moving to Oregon also contribute to local economies. As the BLM improves environmental quality, it will be contributing to the growth of these economic sectors in the State and in local communities.

THE BLM PROVIDES ECONOMICALLY VALUABLE INFRASTRUCTURE, e.g., roads, utility corridors, and communication sites, **AND WATER SUPPLIES** for people throughout western Oregon. Water quality is predicted to improve under the proposed RMPs.

SPECIAL FOREST PRODUCTS ARE RAPIDLY INCREASING IN ECONOMIC IMPORTANCE. But much information about the scale, environmental effects, and economic value of collections remains anecdotal. The probable effects of the RMPs on special forest products collectors is unclear, but BLM managers anticipate increasing regulation in coming years.

MANY TIMBER-PRODUCING AREAS OF WESTERN OREGON ARE ACTIVELY SEEKING TO DIVERSIFY THEIR ECONOMIES, often focusing on tourism and retirement services. However, average wages in retail trade and services, which are the fastest growing economic sectors in the state, are much lower than wages in the timber industry. For Oregon, **IN 1990 THE AVERAGE ANNUAL WAGE IN LUMBER AND WOOD PRODUCTS MANUFACTURING WAS \$25,104; IN SERVICES, IT WAS \$18,757; IN RETAIL TRADE IT WAS \$12,594 (OED 1992a).**

Effects on county infrastructure and services

BLM payments to western Oregon counties have provided an important source of revenue to county governments for many years and helped to support a wide range of county services, most notably law enforcement, public health services, and social services. Revenues from BLM timber sales have historically provided these payments, but Congress has provided "safety net" payments during the 1990s as court injunctions have restricted the sale of timber from BLM lands. **THE EFFECTS OF BLM MANAGEMENT ON COUNTY REVENUES WILL DEPEND ON HOW THE FEDERAL GOVERNMENT CHOOSES TO CONTINUE "SAFETY NET" PAYMENTS.**

IF COUNTY REVENUES DROP, THE POOR AND UNEMPLOYED WILL SUFFER MOST as services that they use are cut back or eliminated. All county residents may be affected to some extent as law enforcement and emergency services, parks and libraries, and maintenance of roads and other infrastructure could be reduced. Meanwhile, communities anticipate increasing demand for many of the services that may be cut, due to unemployment in the timber industry.

BALLOT MEASURE 5 AND SHRINKING TAX BASES IN SOME COMMUNITIES CONSTRAIN LOCAL GOVERNMENTS' ABILITIES TO RAISE REVENUES FROM OTHER SOURCES. NATIONAL FOREST PAYMENTS TO COUNTIES MAY ALSO DECLINE, DEPENDING ON FEDERAL DECISIONS. Ballot Measure 5 and declining National Forest payments particularly affect education, and many people are concerned about the long-term social and economic effects of a poorly funded educational system. Combined with reductions in other local services and infrastructure, these changes could negatively affect communities' economic development efforts by making them less attractive to new businesses and retirees.

WESTERN OREGON COUNTIES VARY GREATLY IN THEIR DEPENDENCE ON FEDERAL FOREST REVENUES; thus, any effects of declining federal timber sales on county revenues and services will be felt strongly in some counties and very little in others. In 1990-1991, county revenues from federal forests were equal to half or more of county expenditures in Curry, Klamath, Jackson, Josephine, and Douglas counties.

Effects on families and communities

Unemployment has been linked with increases in drug and alcohol abuse, domestic violence, and stress-related physical and mental health problems, among other negative consequences. As wood products jobs have declined in many rural communities over the past 13+ years, many workers have left those communities, stretching or breaking ties with family and friends who remained. At the same time, many of these same rural areas, especially in southern Oregon and along the coast, have been experiencing influxes of retirees and other new migrants, who have brought new ideas and expectations for forests with them.

MANY TRADITIONALLY TIMBER-PRODUCING FAMILIES AND COMMUNITIES FEEL THAT THEIR WAY OF LIFE AND MANY OF THEIR BASIC VALUES ARE THREATENED by the changes that have been occurring, and by their perceptions of negative stereotypes of loggers and millworkers in the media. The BLM RMPs compound these perceptions for many who are already greatly distressed by projecting increased unemployment, but even more by seeming not to care about the people who will be negatively affected.

FOR MANY RURAL AND URBAN RESIDENTS OF WESTERN OREGON, THE RMPS ARE A STEP IN THE RIGHT DIRECTION, BUT DO NOT GO FAR ENOUGH to protect the environment and to remedy perceived environmental damage from past management practices. People who have moved to rural areas in search of a pleasant, healthful place to retire or raise a family are especially concerned about the environmental effects of BLM practices such as clearcutting, herbicide use, and prescribed burning.

"JOBS VS. OWLS" DEBATES HAVE DIVIDED MANY COMMUNITIES IN RECENT YEARS and hindered cooperative efforts to address common problems. While the RMPs have often added fuel

to such debates, specific efforts by individual BLM districts towards cooperative planning and management have helped to reduce recent divisions.

Effects on peoples' relationships with the BLM

THE RMPs SIGNAL A SHIFT IN TRUST RELATIONSHIPS BETWEEN THE BLM AND ITS PUBLICS. While many timber interests feel betrayed by the changes in the RMPs, some environmental interests express cautious approval of the BLM's new direction, a reversal of traditional sentiments.

MANY PEOPLE ARE FRUSTRATED WITH NEPA PUBLIC PARTICIPATION PROCESSES, including BLM managers. While citizen participants often feel that they are rarely heard, and do not see how their input is used in management decisions, many BLM managers feel trapped by competing public interests and management constraints set by the courts. The RMP planning processes have often added to this frustration, but BLM districts also have opportunities to improve public participation in planning and management, which they are taking.

Effects on peoples' relationships with the environment

PEOPLE ON ALL SIDES OF RESOURCE MANAGEMENT ISSUES IN WESTERN OREGON CARE DEEPLY ABOUT FORESTS AND THE NATURAL ENVIRONMENT, but they can have differing ideas about how that care is best expressed. The RMPs benefit people whose aesthetic, cultural, and spiritual values are fulfilled by environmental preservation and some forms of recreation. For people who also express personal values and find meaning through working the land, the RMPs provide less recognition of this way of appreciating the natural environment. Thus, **SOME PEOPLE WILL GAIN AND OTHERS WILL LOSE IN THE QUALITY OF THEIR RELATIONSHIPS WITH THE NATURAL WORLD,** as the RMPs provide more opportunities for preservation and some recreation uses and fewer opportunities for timber management, mining, and grazing.

ORGANIZATION OF THIS REPORT

The chapters of this report complement one another in their content and analysis, but each chapter and section listed in the Table of Contents can also stand independently; thus, readers may pay more or less attention to different chapters and sections, depending on their interests and concerns. A complete list of all chapter sections and subsections appears at the beginning of each chapter.

The first chapter Introduction: How and Why This Study Was Done describes the purpose and methods used in this study. A discussion of how social analyses and data can be used by resource managers is also included.

The second chapter Socioeconomic Aspects of Forest Management in Western Oregon is an introduction to three areas of research in the sociology of natural resources that are of particular relevance to BLM management in western Oregon, but which also apply to forest management throughout the Pacific Northwest.

The third chapter Western Oregon Analysis presents an overview and synthesis of the information collected for individual districts; it describes socioeconomic processes that affect or are affected by BLM management throughout western Oregon.

The next six chapters on individual districts present socioeconomic information and analyses specific to each district; they do not repeat discussions in the Western Oregon Analysis chapter that apply to all districts.

The final chapter Conclusion: RMP Benefits and Opportunities for Mitigation notes socioeconomic benefits of the Draft RMPs and presents some specific suggestions for ways BLM districts may mitigate some of the negative effects of the plans, given the expertise of district personnel and the legal constraints that districts currently face. Many districts are already taking some of the mitigative actions described in this chapter; thus, this chapter reinforces the importance of districts' existing efforts and encourages districts to expand these efforts and consider additional ways that they may work to mitigate the negative socioeconomic consequences of the RMPs. A comment on districts' information needs concludes the chapter.

INTRODUCTION: HOW AND WHY THIS STUDY WAS DONE

The chapter title effectively summarizes the main purpose of this introduction. A discussion of how social analyses and data can be used by resource managers is also included. Chapter sections are noted below.

Background for this analysis

- Its purpose

- Its legal and political impetuses

Social analysis in resource management

- Its purpose

- Measurements of social effects

 - Environmental data

 - Economic data

 - Social data

 - Value and opinion surveys

 - Qualitative descriptions

Sources for this analysis

- Existing reports and data

- Focus groups in BLM districts

- Public comment

- Outside interviews

Background for this analysis

Its purpose

This study was commissioned by the Oregon State Office of the U.S. Department of Interior, Bureau of Land Management (BLM) in March 1993 in response to concerns about the adequacy of the socioeconomic analyses in the six Draft Resource Management Plan (RMP)/ Environmental Impact Statements (EIS) for western Oregon that were released in August 1992. The main purpose of this report is to provide a more comprehensive and detailed analysis of socioeconomic conditions affected by BLM planning and management in western Oregon for the final RMP/EISs. An associated purpose is to obviate the need for future studies like this one, conducted by outside researchers late in the planning process: that is, to aid BLM managers to more fully integrate socioeconomic considerations into all stages of resource planning and management. This report and the field work that contributed to it are, however, but one beginning step in this direction.

Its legal and political impetuses

Socioeconomic analyses are required by law as a part of federal resource management planning. The National Environmental Policy Act of 1969 (NEPA [42 U.S.C. 4321, 4331-4335, 4341-4347]), which requires the preparation of an Environmental Impact Statement for federal actions that significantly affect the environment, specifies that socioeconomic impacts must be analyzed in each EIS (NEPA Section 102). The Federal Land Policy and Management Act of 1976 (FLPMA [43 U.S.C. 1701 et seq./P.L. 94-579]), which chartered the BLM, mandates multiple use management for commodity and amenity values and

an interdisciplinary approach to planning (FLPMA Title I Sections 102.a.13 and 103.c; Title II Section 202.c).

While NEPA and FLPMA direct BLM planning throughout the nation, the O&C Act of 1937 (43 U.S.C. 1181) also directs the management of most BLM lands in western Oregon. These lands, named for the Oregon and California Railroad, to which they were granted in 1866, were reverted by the federal government in 1916 after the Railroad's fraudulent land transfer practices came to light. The 1937 O&C Act mandates that the O&C lands be managed

for permanent forest production, and the timber thereon shall be sold, cut, and removed in conformity with the principle of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities (43 U.S.C. 1181a).

In addition to these three acts, the Endangered Species Act of 1973 (ESA [16 U.S.C. 1531 et seq./P.L. 93-205]) has also provided legal direction to BLM managers. The ESA gained attention in the Pacific Northwest with the 1990 listing of the northern spotted owl as a threatened species by the U.S. Fish and Wildlife Service and consequent injunctions placed on timber sales in critical owl habitat by federal district court (FEMAT 1993).

On April 2, 1993, President William Clinton convened a day-long conference in Portland, Oregon, to discuss forest management in the Pacific Northwest and the many contentious issues surrounding it, e.g., environmental quality and preservation, the culture and livelihoods of timber-producing rural communities, federal business and trade policies, and the federal laws noted above. At the conclusion of the conference, the President directed a team of biophysical and social scientists to develop workable plans to address these complex issues.

This post-conference interagency planning effort (officially known as the Forest Ecosystem Management Assessment Team or FEMAT) interrupted work on this study, and, when the plans become final, will probably result in some changes to the BLM's Final RMPs for western Oregon. In addition to their effects on agency plans, the Forest Conference and FEMAT effort brought increased national attention to the social issues involved in forest management in the Northwest. The FEMAT report and accompanying Draft Supplemental EIS analyze the socioeconomic effects of the FEMAT options for western Washington, western Oregon, and northern California, and present a number of analyses of socioeconomic conditions in the planning area, from the state of rural communities to the social values involved in resource management (ISEIST 1993; FEMAT 1993).

This study builds from these FEMAT analyses but differs from them in its focus on a smaller geographical area: the BLM lands in western Oregon, compared with all federal lands in the range of the northern spotted owl. This difference permits a closer, more detailed examination that reveals some patterns and trends that are not apparent at the large scale of the FEMAT planning area.

Social analysis in resource management

Its purpose

The main purpose of this sort of social analysis in resource management is to answer the question "Who is affected by an agency action, and how are they affected?" This question addresses two important concerns: the distribution of effects and the intensity of effects. While the question of who is affected and how is a simple one, an adequate answer must reflect the complexity of many interacting social and environmental processes. For example, many people may feel some small effect of an agency action, while a small number of people may be intensely affected. And effects are likely to be varied and difficult to compare, for example, some people may gain or lose income while others gain or lose a family tradition or a sense of security in their lives. Also, any one person may well experience a variety of effects, both positive and negative, and of differing intensities depending on their individual circumstances and values. How then have researchers sought to measure and describe these diverse social effects of resource management?

Measurements of social effects

Environmental data. — The environmental analyses in an EIS provide information about places, species, and environmental processes that are important to people. For example, predictions of changes to fish and wildlife habitats and populations are indicators of how people who care about these species will be affected. An increase in salmon populations will likely benefit recreational anglers, commercial fishermen, and people for whom viable salmon runs are spiritually or aesthetically valuable, among others. A glance through an EIS or the resource management literature reveals what resource managers, researchers, and legislators have deemed important: timber, soils, water, air quality, fish and game species, biodiversity, endangered species, wetlands, visuals, etc. Many other things could be included, if sufficient importance (i.e., agency policies and budgets) were assigned to them, e.g., nonvascular plant and invertebrate animal species, terrestrial microclimate effects of timber harvest, and geological formations that are not of commercial value.

Economic data. — While environmental data are seldom considered as measures of social effects, economic data are some of the most common measures of social effects of resource management. Employment and income are standard measures of social well-being; they can be complemented by analyses of economic diversity, government revenues, and investment patterns, among many other economic factors, to portray the condition of a community or region. These measures, however, provide only a rough sketch of how people are affected; employment figures do not capture the personal and community experiences of job loss or creation, and changes in income do not necessarily correlate with changes in quality of life.

Social data. — Social data provide additional means of describing a group of people and some indicators of social well-being. Population data can show the age, ethnic, and educational characteristics of people in a community or region, who is moving in and out of an area, and, combined with economic data, which groups are financially well-off or poor. Common indicators of social well-being include marriage and divorce rates, numbers of single-parent households, demand for services associated with alcohol and drug abuse or family violence, and crime rates.

Value and opinion surveys. -- The types of economic and social data mentioned above measure some of the more tangible potential effects of resource management actions. But the effects of resource management on people are not limited to the tangible and readily quantifiable. People carry many values and opinions that shape their experience of the world and thus their reaction to resource management actions. Myriad surveys in the past couple of decades have addressed peoples' ideas and feelings about the environment, government, personal goals and values in life, and so on. The limitations of such surveys lie in the questions framed by the researcher, who decides which issues merit exploration and in what contexts, and in the often limited range of answers available to respondents.

Qualitative descriptions. -- The limitations of environmental, economic, social, and survey data lie in their incomplete portrayal of the social effects of resource management. Qualitative social science research, which relies on open-ended interviews, observations of people, and analyses of written records, among other methods of data collection, seeks to describe peoples' experiences, values, and interactions that are not readily captured in the measures described above. In this form of research, the people who are studied have the greatest opportunity to define what is important to them and to express their own perception of the world, and researchers have the greatest opportunity to explore differences in experience and values among individuals. These methods, however, can require substantial investments of time by researchers and readers: to fully document even a small set of the social effects of an RMP through qualitative research would require extensive field work and a voluminous report.

Sources for this analysis

Existing reports and data

To adequately describe the social effects of any resource management action, it is important to use a variety of data types, for as noted above, each type of data shows a different aspect of human life. Existing reports and data sources provide a plethora of information, from state and county business and economic statistics, to U.S. census data, surveys of Oregonians' environmental attitudes, and ethnographic studies of loggers and their families. The bibliography provides a complete list of the many different studies and information sources that contributed to this report. Few of these secondary sources of information directly address the social effects of BLM management in western Oregon, however. To discern these effects is a difficult task, at best, when local and regional socioeconomic patterns and trends are shaped by multiple interacting factors that range from international trade patterns to national health care and welfare policies to property values and crime rates in other states. To begin to discern the specific effects of BLM management within changing communities and regions, I visited each of the six western Oregon districts to ask questions that could not be answered from the secondary data.

Focus groups in BLM districts

In each district, I met for about 3 hours with a group of BLM employees, selected by the District Manager or RMP Team Leader, to discuss the uses of BLM lands in the district. Identifying the uses of BLM lands, and then discussing the users of BLM lands and how they might be affected by BLM actions constituted the first step in what social scientists often call a stakeholder analysis. A stakeholder, as one might guess, is a person who has a "stake" or an interest in what happens on a piece of land. (A stakeholder analysis can also be done for issues or policies without a geographical base, e.g., health care policy, but for this study, the lands that the BLM administers were the focus.) A stakeholder analysis

consists of identifying stakeholders and determining what their interests are. This approach to documenting the social effects of BLM management depends on two assumptions: 1) all users of BLM lands are stakeholders, i.e., they have some interest in the lands they use, or else they would not be there; 2) stakeholders are affected by BLM actions when those actions affect their interests.

Public comment

Although all users of BLM lands may be considered stakeholders, it is not necessary to use land, for whatever purpose, to have an interest in it. Public comment letters sent to the BLM provide a valuable record of who cares about BLM lands and why. In each district, I looked through all the letters received in response to the draft RMP, noting the issues and concerns addressed, the tone of the responses, and the types and addresses of individuals and organizations submitting responses. With several hundred letters to examine in each office and only a day or two to conduct meetings and interviews as well, time was insufficient for a systematic analysis, but I was able to gain some sense who was writing and why.

Outside interviews

Although the focus groups and public comment provided a great deal of information about BLM stakeholders in each district, they did not provide a complete answer to who was affected by BLM actions and how. The public comment revealed that not all people who have direct interests in BLM lands were discussed in the focus groups, and the public comment cannot be assumed to represent all interested parties. Furthermore, people who do not have a direct interest in BLM lands may still be affected by BLM actions, for example, through ripple effects of unemployment in a local economy.

To address these research concerns, and to gain a fuller understanding of local social environments, I interviewed several people in each district who were familiar with the BLM and the area, but who were not BLM employees. These people were selected by district employees and often had worked with the BLM citizen advisory council in the district. They included local bank officers; tribal representatives; city, county, and state officials; social service and development administrators; timber interests; and environmental professionals; among others. As appropriate to the background and expertise of each, I asked them to comment on how they saw the area changing, how they saw the BLM fitting into these changes, and what social effects they anticipated as a result of the RMP.

SOCIOECONOMIC ASPECTS OF FOREST MANAGEMENT IN WESTERN OREGON

This chapter is an introduction to three areas of research in the sociology of natural resources that are of particular relevance to BLM management in western Oregon, but which also apply to forest management throughout the Pacific Northwest and even further afield. Chapter sections are noted below.

Rural and urban values, perceptions, and cultures

- Results of value and opinion surveys
- Perceptions of the natural environment
- The treatment of values in resource management
- The diversity of values in rural and urban settings

Community stability

- History of community stability as a concept in U.S. forest management
- What is community stability?
- Factors thought to contribute to community stability

Power and participation in resource management

- Styles and cultures of political participation
- Perceptions of resource management politics in western Oregon
- Building trust in resource management

Rural and urban values, perceptions, and cultures

Many people to whom I have spoken, who represent diverse backgrounds and opinions about forest management, perceive the root of controversies over forest management in the Pacific Northwest to be the differing values and cultures of urban and rural residents. From this viewpoint, urban residents and recent urban-to-rural migrants generally take more environmentalist and preservationist stances, while long-time rural residents are stronger advocates for values associated with timber production.

With urban dwellers forming the majority of the population (70.5% of Oregon's population in 1990: USBC 1992), people on all sides of Northwest forest issues perceive a political imbalance in the discussion of these values, and they interpret this imbalance in different ways. To environmental advocates, it is seen as a majority opinion in favor of ethical action towards the environment. In contrast, advocates of sustained timber production are likely to perceive the situation as unjust: a majority of people who know little about the natural environment are seeking to control or eliminate the livelihoods of those who do. One logger has described the typical environmentalist as a "one-way son-of-a-bitch who takes his annual walk in the woods and then goes home and votes against logging" (Carroll and Lee 1990). On the other hand, loggers and other woods product workers have been vilified as "tree murderers" and "land rapists" in the popular media (Lee 1993).

Popular perceptions and stereotypes can carry varying degrees of truth. The strong emotions and polarization that have developed over Northwest forest issues in recent years add import to a thoughtful examination of common generalizations about the environmental values of urban and rural residents.

Results of value and opinion surveys

The Oregon Business Council released results from an extensive survey of Oregonian's values and beliefs in May 1993 (OBC 1993). This study showed more commonalities than differences between the core values of urban and rural residents in the state. All demographic groups identified "participation in family" as their most important personal value; "career or job opportunity" came in a distant, but still strong second in a set of ten personal values. Education also proved to be a vital concern for most respondents, given its relation to career opportunities for present and future generations.

Overall, Oregonians rated concern for the environment third in their set of personal values (OBC 1993). Oregon Business Council researchers did find some regional differences in environmental values and opinions between metropolitan, western, southern, and eastern Oregon, with the greatest difference between the metropolitan and eastern regions, but even this difference was still quite small. For example, on a question that asked respondents to rate themselves on concern for jobs vs. concern for the environment, the vast majority of respondents from all regions considered jobs and the environment to be equally important.

The FEMAT team reviewed a number of surveys that focused specifically on environmental values (FEMAT 1993; Steel 1993). These surveys showed

- 1) Environmental concern has been increasing in all parts of the world in the last 20 years, including among rural residents of the Pacific Northwest.
- 2) Urban residents in the Pacific Northwest generally express stronger environmental values and concerns than rural residents, but this is a matter of degree, not of presence or absence of concern.
- 3) At present, generational differences in environmental values and concerns appear much greater than urban-rural differences; the younger the age, the greater the concern.

Such surveys would seem to suggest that little difference exists between urban and rural residents in their basic social and environmental values. The surveys do show how urban and rural residents responded to abstract questions about their values, but they do not show how peoples' answers to these abstract questions are related to specific actions they may take or specific opinions they may hold. In other words, such surveys exclude the differing contexts in which people live, articulate, and act on their personal values.

"Public opinion polls," which ask for peoples' opinions on specific social or political issues, often do not directly address peoples' basic values, but usually ask more pointed questions within the context of current political events. In opinion polls about Northwest forest issues, however, polls administered by different researchers at different times have shown varying majority opinions on questions of economy and environment, which have often been phrased as jobs vs. owls (FEMAT 1993).

If polls and surveys provide inconclusive results over differences in rural and urban values, it is worth examining complementary factors that may also be contributing to controversy over Northwest forest management.

Perceptions of the natural environment

There are doubtless numerous factors that contribute to forest management controversies in the Pacific Northwest (for example, issues of power and participation, which will be considered in a later section), but one of those factors appears to be differing perceptions of the natural environment. For example, different understandings of how a natural area functions may lead people who agree that they care a great deal about sound, sustainable forest management to disagree strongly over whether clearcutting is an environmentally sound or destructive practice.

Some differences in perception can be a product of different amounts of knowledge about a particular resource management issue, as Beebe and Omi (1993) have described for prescribed burning issues. My own research, however, has shown that differences in the ways people understand forest ecology can have more profound bases (Richardson 1993b). This research has focused on people who work in and manage forests, not the general public, but even within this small sample of people who are most knowledgeable about forests, some basic differences appear. These differences appear to be products in part of individuals' childhood experiences of nature (i.e., whether they grew up on a farm, in a small town, or large city) and of their current economic relationship to the land (i.e., whether they own and manage it for their personal livelihood or whether they manage an agency's or company's land for profit, multiple use, or preservation).

The most fundamental difference in the ways participants in this study thought about environmental processes was whether they perceived humans to be part of or separate from nature (Richardson 1993b). Farmers, loggers, their families, and others who depend on the land for their livelihood appear much more likely to consider humans and human activity a part of natural processes, especially when several generations have lived and worked on the same land. Buzz Eades, a participant in the Forest Conference speaks to this understanding of the environment:

My two sons, Corey and Kevin, work with me every day in the woods. Like I said, we cut down trees, and I have a daughter that's a wildlife biologist and a forester. We work on some of the same ground our grandfather worked on every year. Mr. President, my people, my family are forest people. We love the beauty of the forest; we respect it. It's part of who we are (Richardson 1993a).

In contrast, people from more urban backgrounds are likely to perceive humans as separate from nature and natural processes, which is hardly surprising considering that that is much more the case in their experience (Richardson 1993b).

Sturtevant reached similar conclusions about urban and rural residents' perceptions of nature in a study of rural interface residents in Jackson County:

This survey shows two distinct groups living in the interface: urban, newer migrants - both retired and younger; and rural, old timers who grew up in or near the interface. The first group most likely grew up in the congestion and pollution common to urban areas and developed a largely symbolic attitude towards the environment, adopting a view of rural lands as a pastoral escape, or the environment as a thing of beauty that is reinforced by mass media, Sierra Club books, vacations, and wilderness recreations...Rural people, in contrast, have greater kinship with nature. Use of the environment is more taken for granted, often as an integral part of the rural economy (USDIBLM Medford District Office 1992).

For people who view humans as "unnatural," human activities in forests, among other wild places, are generally thought to be destructive. (This is a relatively recent attitude in the U.S. and may not be true for other cultures; e.g., European settlers who led westward expansion in this country were more likely to consider nature a destructive force that needed to be tamed by humans: Nash 1982; Richardson 1993b.) People who consider humans a part of nature are more likely to view most human activities in forests as benign or constructive without strong proof to the contrary. In interviews for this analysis and for the study cited above (Richardson 1993b) many rural residents whose families have lived in the same area for several generations expressed distrust of studies by urban-based scientists that, in their view, do not consider long-term cycles of natural destruction and renewal, which are part of many rural peoples' family histories. Criticism was most often directed towards specific studies and subsequent management decisions, rather than towards the scientific community in general. Some people tempered their criticisms with examples of scientists who had earned their respect, often by living or working in the same area for long periods and listening thoughtfully to the observations of rural residents.¹

When moral judgments are drawn from different understandings of natural processes, be they "Logging is evil" or "God put these forests here for us to use and renew", discussions of forest management between people with different perceptions of forest ecology can become explosive.

The treatment of values in resource management

Commodity values associated with resource management are generally measured in dollars, and economists have developed methods for assigning dollar values to non-market benefits of public lands such as recreation, visuals, etc. But most managers acknowledge that many values associated with their lands are not readily quantifiable, and discussions of these values in planning and policy documents often are limited to an inventory of intangibles such as aesthetic, spiritual, and existence values (e.g., FEMAT 1993). For the most part, managers seem to associate these intangible values with environmental preservation, but these assumptions are seldom examined carefully in the resource management literature. In reality, these values are complex and can have multiple expressions; some examples are provided in Table 1, based on the differences in perception described in the last section. Managers who wish to manage for such values on public lands need to more closely consider the many possible expressions of

¹ Reviewers offered two general comments on this section. The first was the observation that many urban environmentalists advocate viewing humans as part of nature, on the assumption that if everyone had this view, they would be more inclined to preserve the environment than to "degrade" it through intensive human use. The fact that some urban environmentalists are advocating a view of humans as part of nature indicates that this view of nature may well be foreign to many urban dwellers, and thus does not contradict the general conclusions in this section. It does indicate the need for studies of environmental perceptions to be extended beyond rural areas, and rightly suggests that the discussion here presents only a partial picture of the different ways people may understand the natural world.

The second comment noted that this section could be interpreted as implying that rural people have "better" knowledge of forests than urban residents. The purpose of this discussion is to illuminate a source of conflict over forest issues, not to provoke conflict by claiming one group knows forests better than others. The main point is that people on all sides of forest management issues can have very different, often unstated ideas about how forests work that may contribute to misunderstandings or conflicts and cause some people to reject information that others accept without question.

these intangible values and how any given management action may fulfill some value expressions while diminishing others.

Table 1. -- Sample expressions of basic values for people with different understandings of nature.

Basic values	Value expression if humans are seen as separate from nature...	Value expression if humans are seen as part of nature...
Spiritual values	Are based in experience of pristine nature	Are based in participation in natural cycles
Aesthetic values	Clearcuts and plantation forests are ugly; natural forests are beautiful	Clearcuts are ugly, but new, young trees growing are beautiful, as are all healthy forests
Cultural values	Native Americans valued the land and lived on it lightly	European forebears valued the land and made it fruitful
Responsibility to future generations	Is to preserve what is left of nature	Is to preserve what is left of traditional culture and its values for the land
Existence and option values	Are based in the last remnants of what has made America great: her wild places	Are based in the last remnants of what has made America great: the pioneering spirit of her people who live close to the land

The diversity of values in rural and urban settings

Table 1 provides only a small sample of the many expressions of environmental values that people may make. And, though the table presents contrasting value expressions, these need not be mutually exclusive. For example, many who see humans as part of nature still appreciate the beauty of wilderness areas where no humans live, and people who see humans and nature as separate still may sense a personal participation in nature's cycles as they plant, tend, and harvest their gardens each year.

Anyone who has lived in a city knows that urban dwellers do not share identical values and perceptions of the environment or anything else. Different neighborhood, social, religious, and ethnic groups all express a diversity of thought and experience. The same is true of rural communities, and any generalizations about urban-rural differences must recognize such diversity. For example, sociologist Richard Gale (1991) has proposed a typology of nine different kinds of forest-dependent communities in the Pacific Northwest, each of which, he suggests, can be expected to respond differently to ecosystem management plans and proposals, based on the differing economic structures and dominant values of each community type. Table 2 summarizes Gale's typology. In using this typology and noting the example communities, it is important to recall that typologies are necessarily both abstractions and simplifications of reality. In actuality, most forest-dependent communities, including examples in Table 2, have attributes of more than one community type, and many are in the process of changing from one or more dominant types to other types.

Community stability

Community stability has long been a goal of forest management, and the O&C Act, which requires management for the "economic stability of local communities and industries," (see Introduction) makes consideration of this goal especially important to the BLM in western Oregon. Despite its long presence as an issue in U.S. resource management, natural resource managers, researchers, and legislators are still exploring what community stability means in a changing world and how it can be measured.

History of community stability as a concept in U.S. forest management

Researchers who have traced the origins of the idea of community stability as a desirable outcome of forest management in the U.S. find that it first appears in the development of sustained yield theories and policies early in this century. Sustained yield management was promoted by Gifford Pinchot, David Mason, and other early American foresters in response to concerns about forest practices such as uncontrolled "cut out and get out" forest harvesting in the Lake States that left bare ground and stranded communities in its wake. Pinchot and other early advocates of sustained yield forest management drew their theories from studies of German forestry and observations of forest-based communities in that country (Drielsma et al. 1990; Lee 1990; Phelps 1992). Pinchot clearly defined the conservation of the Nation's forests and other natural resources as a social and moral issue, and essential to the welfare of the American public, noting:

It is the duty of the Forest Service to see to it that the timber, water-powers, mines, and every other resource of the forests is used for the benefit of the people who live in the neighborhood or who may have a share in the welfare of each locality. It is equally its duty to cooperate with all our people in every section of our land to conserve a fundamental resource, without which this nation cannot prosper (Pinchot 1910, pages 51-52).

Although concern for forest-based communities was one factor that contributed to the creation of national Forest Reserves in 1897 and the adoption of sustained yield ideals by a young Forest Service, community stability was not stated as an explicit goal of forest management in forest law until several decades later, with the passage of the O&C Act in 1937 and the Sustained Yield Act in 1944 (Lee 1990; Phelps 1992). Lee (1990) notes that this early omission is likely due to two factors: 1) sustained yield policies were promoted because they promised a variety of goods, of which community stability was but one, 2) the assumption that community stability was an automatic outcome of sustained yield management (Lee 1990). Margaret Shannon (University of Washington, personal communication) counters that the omission may not have been an oversight, as Lee implies, but a purposive decision to not give resource management agencies a social mission.

More recent examinations of the causal links between sustained yield and community stability have shown them to be tenuous (Schallau 1989; Drielsma et al. 1990; Phelps 1992). Researchers who have made these conclusions base them on observations of poverty, entrepreneurial spirit, and resiliency in timber-producing communities, among other factors.

Table 2. -- Types of forest-dependent communities in the Pacific Northwest (Gale 1991).

Community type and example	Community characteristics	Dominant forest-related issues
Natural resource manufacturing or administration (Reedsport)	Economy based on exploitation of forest natural resource base and associated manufacturing (e.g., sawmills); could also include agriculture, mining, and fisheries	Potential conflicts between 1) resource-based industries (e.g., fishermen worried over logging-related stream siltation), 2) recreational and commercial forest users, 3) expanding forest-related tourism and forest-based manufacturing
Indirect or non-locality dependent manufacturing or service (Bend)	Economy based on manufacturing industry or service that only indirectly or coincidentally involves a forest location; could include traditional wood product manufacturing (e.g., furniture), new light industry, large government facilities (e.g., prisons)	Dominant community issues may not involve forest resources, except as industrial forest users are affected by forest policies
Transit recreation (Sisters)	Service economy oriented to facilities for short-stay visitors, some of whom may be on forest scenic highway tours	Traffic control and parking; provision of quick, mass access to forest; location of large, highway-oriented tourist facilities; appearance of "highway strips"
Destination recreation (Jacksonville)	Service economy oriented to forest-based recreation destinations, e.g., a designated forest place (Oregon Dunes NRA), a forest-related theme place (Leavenworth), or a forest-oriented facility (Sun River)	Location and expansion of large, nationally marketed resorts; domination of recreational forest areas by destination facilities; provision of year-round employee housing
Recreation residence (Zig Zag)	Provides weekend and summer rental and permanent recreation housing; much economic activity is resort-like and tourist oriented, though year-round residents may include retired former tourists; dominant service economy is often seasonal	Forest access and related parking; displacement of lower-income year-round residents by recreational housing developments; possible opposition to providing transit recreation facilities or major destination recreation developments

Table 2 (Continued).

Retirement residence (Brookings)	Community provides residence and associated facilities and services for seasonal or permanent retirees	Easy, low-cost forest access for recreation; provision of small-scale urban services; may resist transit or destination recreation development; more affluent retirees may compete for housing with recreation residences; less affluent retirees may transform transit recreation facilities (e.g., RV parks) into permanent residences
Commuter residence (Troutdale)	Community serves primarily as residence for commuters; provides associated services	Transportation and infrastructure, often in conjunction with rapid growth
Art colony/educational (Ashland)	Service economy provides facilities for artists, including exhibition and sale space, or for a major educational institution	Combined recreational and aesthetic interests; public forest access, reasonably priced housing, public recreation facilities; may resist expansion of transit recreation
Native American (Chiloquin)	Economy includes tribal services and tribal-supported industries	Public versus local forest access; reasonably priced housing; public recreation facilities; may resist expansion of transit recreation

What is community stability?

The lack of any description of community stability in the preceding paragraphs covering its history in U.S. forest management reflects its usual treatment in resource management discussions. Community stability is an abstract, often emotionally laden concept that many people may embrace while each interprets it differently.

The problem of definition is two-fold: one must define both community and stability. Recent discussions of community stability by natural resource sociologists have identified three broad categories of definitions for human communities: a community may be defined as a geographic area, as a local social system, or as a type of relationship, e.g., Carroll's description of the occupational community that exists among Northwest loggers (Society of American Foresters 1989; Carroll and Lee 1990; FEMAT 1993). In analyses of community stability, researchers have most often defined "communities" operationally by political boundaries, but political boundaries rarely coincide with the boundaries of the social and economic relationships that constitute functional human communities (Machlis and Force 1988; Schallau 1990; FEMAT 1993). In addition, researchers have chosen geographical regions ranging in size from towns to collections of counties to represent a single community (Machlis and Force 1988).

Researchers have also struggled with the concept of "stability." Waggener (1977) has argued that the maintenance of the status quo is the most accepted definition of stability, but researchers have been challenging this notion from the earliest studies of rural, timber-producing communities in the 1940s. In their 1946 study of two Montana communities, Kaufman and Kaufman noted "The term community stability, as used here, does not imply a static condition, the absence of change, or the necessity of maintaining the status quo. The basic implication is orderly change rather than a fixed condition (Kaufman and Kaufman 1990, page 32)." Machlis and Force (1988) note that "stability" means different things in different academic disciplines. For example, in ecology, it may be considered a dynamic equilibrium, resilience in response to external stress, or ability to accommodate change. Social scientists often consider stability to have multiple dimensions, e.g., rates of change and adaptation, definition of personal roles, diversity of community economy and functions, community population and structure, and social conflict (Machlis and Force 1988).

Recognizing the importance of the concept of community stability in American resource management and law and the difficulties in defining it, a National Task Force of the Society of American Foresters worked in the late 1980s to specifically address these issues. The Task Force, consisting of nine resource sociologists, economists, and managers who had worked on community stability policy and research, provided the following definition of community stability in their report, adopting the Kaufmans' concept of stability as "orderly change."

Community stability is best defined as a process of orderly change within those political and geographical areas that are significantly affected socially or economically by forest resources...This issue cannot be adequately considered apart from quality of life, environmental considerations, and nontimber and noncommodity uses of forest lands...Community stability concerns the prosperity, adaptability, and cohesiveness of people living in a common or functional geographic area and their ability to absorb and cope with change (emphasis added; Society of American Foresters 1989).

Table 3. -- Some socioeconomic factors that are thought to affect community stability.

Community stability factor	Measures	References
Economic diversity	Occupational, industry, and income mixes	Machlis and Force (1988) Ashton and Pickens (1990) Phelps (1992)
Timber or forest dependency	Forest-related employment and income; per capita timber harvests or per capita acres of forest	Machlis and Force (1988) Ashton and Pickens (1990)
Economic stability	Employment, income, price, and investment levels	Schallau and Alston (1987) Machlis and Force (1988)
Population stability	In- and out-migration; age, ethnicity, and gender ratios	Machlis and Force (1988) Weeks (1990)
Social cohesion or community solidarity	Marriage rates; numbers of churches and service organizations; low crime rates; continuity of community traditions (e.g., fairs, museums); support for public services (e.g., votes on tax levies); sharing of resources among households in times of poverty	Machlis et al. (1990) Muth (1990) Weeks (1990) Phelps (1992)
Structural diversity	Indices of diversity based on community infrastructure and services	Phelps (1992) FEMAT (1993)
Centrality (the access a community has to a region) or location	Presence of government offices and transportation hubs; proximity to major traffic corridors or coastal ports	Phelps (1992) FEMAT (1993)
Quality of life	Surveys of individuals' satisfaction with community facilities and amenities	Marchak (1990)
Human capital	Skill, experience, and education levels	FEMAT (1993)
Size	Population levels and densities	FEMAT (1993)
Local leadership	Narrative descriptions	FEMAT (1993)
Prosperity	Income levels and distributions	FEMAT (1993)

Factors thought to contribute to community stability

Many factors contribute to the prosperity, adaptability, cohesiveness, and ability to absorb and cope with change of any group of people. Table 3 lists some factors that researchers think influence community stability. With the exception of timber or forest dependency, the relationship between community stability and each factor is generally thought to be positive; however, many of these factors are also open to interpretation, both in their definitions and measures. As each community is unique, some are also exceptions to general trends, and the complex interactions among factors differs for every community at any given point in time.

Those who are especially concerned with the O&C Act's reference to "economic stability" will note from the table that economic stability is one factor thought to contribute to community stability. These factors do not operate in isolation from one another, however, and any one factor affects other factors. For example, "social" factors such as community cohesion, local leadership, and quality of life can profoundly affect economic stability and diversity, and vice versa.

A final note on community stability bears attention in this analysis. While a community, through whatever definition of community and measure of stability, may be considered prosperous, adaptable, and cohesive, this does not mean that every person in the community experiences the same level of stability. The fact that most people are doing well can obscure the suffering of some individuals or groups. Thus, in assessing the socioeconomic impacts of BLM management in later sections of this report, effects on individuals are included, and then used to examine how these individual experiences play out at the larger scales of community, district, state, or nation.

Power and participation in resource management

As mentioned previously, analyses of differing environmental values and perceptions provide only a partial explanation for the intensity of conflicts over forest management in the Pacific Northwest. Also at issue in the debates is the basic human desire for some measure of control and certainty in one's life and surroundings. This is true for the timber family protesting the loss of their livelihood, for the neighbor or visitor to BLM lands protesting the cutting of a favorite forest, and for the BLM manager protesting the protests that disrupt management plans and activities.

All resource management agencies and agency offices are not alike; they have different ways of doing business, both within the agency or office and with outside communities and interests. These ways of doing business can apportion power and voice in different ways, which in turn can produce different effects of management on people.

Styles and cultures of political participation

The ways in which an agency does business are products of events and people external to the agency, internal agency politics and directives, and the personalities of local agency managers. In studies of the U.S. Forest Service, Shannon (1990) described four styles of citizen participation in resource management. The styles result from both the approach that citizens take, through informal or formal channels, and the nature of the relationship between citizens and the agency. In a personal relationship, local citizens view agency staff as individuals, and believe agency policies can be influenced through the

individuals that comprise it. In an impersonal relationship, agency staff are viewed as agents for a large, impersonal organization that determines their actions and policies.

Table 4. -- Purposive styles of citizen participation (Shannon 1990).

Structure of the interaction	Type of relationship	
	Personal	Impersonal
Informal	Citizens work directly with individuals in the agency to change their values and thus their actions as well as formal policy	Citizens use the media, rumor, or bluff to influence the climate of public opinion to which the agency is responding
Formal	Citizens work with their political representatives, circulate petitions, sponsor mass mailings, write comments on EIS/Plan documents in order to broaden the political scope of the issues	Citizens work through administrative appeals processes, judicial review, and legislative forums to change the legal and political requirements for and constraints on agency management decisions

If managers recognize and act on some participation styles over others, they give greater influence to individuals and groups facile with those styles. For example, preferential recognition of formal communications such as comments on planning documents and legal actions favor people and groups who are highly literate, politically organized, and who have the funds to support legal action. With a recent U.S. Department of Education study showing that 40% of the American population has little more than rudimentary reading and writing skills (Seattle Times 1993a), a primary reliance on written comments constitutes a de facto elimination of a substantial portion of potential citizen participants.

In contrast, a reliance on verbal communication, such as comments in public meetings and informal discussions can give greater voice to local citizens who can more readily travel to district meetings, are more likely to hear about them, and have the most opportunity to regularly visit with local managers. Local interests, however, do not necessarily represent everyone with an interest in BLM management. Recreational users, for example, are likely to be more geographically dispersed than miners and ranchers who use BLM lands.

Finally, the degree to which a district hears and responds to any form of citizen communication will vary with the management style of the District Manager:

Not only does the staff take its cue from the supervisor on how to respond to the public...the way the supervisor treats and listens to the staff is highly correlated to the way the staff treats and listens to the public...when the supervisor encourages dialogue among the staff concerning policy and management choices, and when the staff participates fully in designing policy options responding to changing social values, they learn a responsive style of management (Shannon 1990).

Perceptions of resource management politics in western Oregon

In studies of participants in national forest planning, Force and Williams (1989, cited in Cortner and Shannon 1993) found citizens to prefer methods that involve two-way communication and shared decisionmaking. In the Forest Conference, the only issue that all parties addressed and agreed on was the need for all interest groups to participate in crafting solutions to current forest management problems, as Clinton noted in his closing remarks:

This conference has established a dialogue... And it's got to continue, between us and you, and among yourselves. You have got to be part of the solution. Even if we make the most enlightened possible decisions under the circumstances, they will be all the more resented if they seem to be imposed without a continuing mechanism for people whose lives are affected here to be involved (Richardson 1993a).

Public comments on the Draft RMP and in interviews in the districts indicated that many citizens are dissatisfied with public involvement processes. Environmentalists, local governments, timber interests, and rural interface residents, among others, echoed requests to be more fully involved in decision-making, e.g., in the design, not just the review, of preferred alternatives. Some writers expressed weariness with letter-writing and attendance at hearings, saying they did not see the BLM responding to concerns or requests that they had been repeating over the years.

Comments on the Draft RMPs from many timber and timber community interests also expressed betrayal and anger, stating that the BLM had been doing a good job managing its lands for the past 50 years, and questioning the need and legality of such radical changes in its timber program. This was not universally true, however; some individual loggers and mill workers concerned about environmental degradation offered their approval for the plans. Many environmental interests offered cautious approval to the plans as a step in the right direction, but others expressed the same degree of anger that many timber interests did, because in their view the plans still favored timber production.

Building trust in resource management

Firey (1960) has identified three essential requirements of a viable resource management system: 1) it must be ecologically possible, 2) it must be economically gainful, 3) it must be culturally acceptable. Cultural acceptability is marked by consent among people to sacrifice personal gain for the good of others, and requires trust that all will follow agreed-on actions.

The lawsuits and the expressions of betrayal and mistrust that have characterized resource management in the Pacific Northwest in recent years are not signs of cultural acceptability of recent or current plans. Recalling that successful resource management requires both consent and trust, successful resource management planning must work to build these qualities. Despite the intention of public involvement requirements in NEPA towards these ends, actual agency public involvement programs often serve to promote adversarial relationships among various interests, e.g., by creating public forums that encourage participants to maintain definite, oppositional stands rather than recognize and work towards common interests (FEMAT 1993, page VII-98).

Examples do exist of efforts to build trust and consent in western Oregon BLM districts, and these are characterized by collaborative efforts among a variety of interest groups, in which the BLM is one

WESTERN OREGON ANALYSIS

This chapter presents an overview and synthesis of the information collected for individual districts, presented in the following six chapters. This chapter describes socioeconomic processes that affect or are affected by BLM management throughout western Oregon, in the following sections.

Population

- District population data
- "Severely Affected Communities"
- Implications of outmigration patterns
- Implications of immigration patterns
- Residential development in rural interface areas
- What population statistics do not show

Employment and income

- Factors affecting employment in the timber industry
 - National economic trends
 - Changes in worker productivity
 - Non-federal timber supply
 - Federal timber supply
- General trends in employment
- Income trends
- Social effects of employment and income trends
 - Effects on individuals and families
 - Community-level effects

Business and industry

- Wood products industries
- Economic diversity and development

County revenues, infrastructure, and services

- Public forest revenues to county governments
- Predictions for federal payments to counties
- Impacts on county services of reduced federal revenues
- Ballot Measure 5
- Individual and business taxes
- Loss of infrastructure in small communities

Stakeholders

- Timber management stakeholders
- Special forest products stakeholders
- Fish and wildlife stakeholders
- Infrastructure and water stakeholders
- Illegal activities
- Other commercial stakeholders
- Recreation stakeholders
- "Priceless" resources
- Native American stakeholders

Population

District population data

Two demographic trends dominate the population data for western Oregon from 1980 to 1990. The first trend is the outmigration of workers in the early part of the decade in response to a severe economic recession, and the second trend, strongest in southern and coastal Oregon, is the immigration of retirees. These trends show differing intensities in different parts of the state; Coos and Klamath counties were hardest hit by outmigration, while more economically diversified and urban areas such as Clackamas and Washington counties felt far less impact of the recession. In general, populations in urban areas recovered faster from the recession and have shown larger growth rates than more rural areas (OED 1992a).

To illustrate these trends, tables in each district analysis show total population, urban population, and population over 65 for each county in western Oregon from the 1970, 1980, and 1990 censuses. They also show the proportion of persons who lived outside each county in 1985 and poverty rates.

Migration data for the state show a net immigration of 36,217 people to Oregon from 1980 to 1990, 72% of whom were over age 65. Among the 19 counties covered in this study, 13 (all but Clackamas, Columbia, Lincoln, Linn, Polk, Washington, and Yamhill counties) experienced greater net immigrations of people over age 65 than they did of people under 65 (OED 1992a).

Although some community-level data are included in district analyses, this level of data is not readily available for unincorporated areas, which are home to as much as 80% of the population of some counties in the study area.

"Severely Affected Communities"

In 1992, the Oregon Economic Development Department designated 9 counties and 69 additional incorporated cities and unincorporated places as "severely affected communities." Designations were based on 1) decline in timber industry employment, 2) high rate of unemployment compared with the state, and 3) a community's demonstration that it had suffered or was likely to suffer economic decline. Designated counties and communities are targeted for a variety of economic development efforts and are listed in Table 5 (Seidel 1993).

A study of the location and demographic characteristics of the 94 incorporated cities in this list showed that, compared with all other cities in Oregon, severely affected communities are more likely to be located in eastern Oregon, in nonmetropolitan areas, and outside the Willamette Valley. These communities are also smaller: an average of 3,700 residents, with no cities over 50,000, compared with an average of 10,000 residents for other Oregon cities. The average population growth for incorporated severely affected communities was -0.6%, compared with 13.5% for all other cities and 7.8% for the state as a whole for 1980-1990 (Seidel 1993).

Implications of outmigration patterns

The outmigration that many Oregon counties experienced in the 1980s was led by younger workers and their families. Combined with the immigration of retirees that many of the same areas have been

Table 5. -- Severely affected communities in western Oregon (Oregon Economic Development Department).

District	County	Severely Affected Communities	
		Number of communities	Communities
Coos Bay	Coos Curry	All 1	Entire county Gold Beach
Eugene	Lane	22	Cheshire, Coburg, Cottage Grove, Creswell, Culp Creek, Deadwood, Dexter, Elmira, Fall Creek, Florence, Junction City, Lorane, Lowell, Mapleton, Marcola, Noti, Oakridge, Saginaw, Springfield, Swisshome, Thurston, Walton
Klamath Falls	Klamath	All	Entire county
Medford	Jackson	5	Butte Falls, Central Point, Medford, Prospect, White City
	Josephine	5	Cave Junction, Kerby, Merlin, Selma, Williams
Roseburg	Douglas	All	Entire county
Salem	Benton	2	Blodgett, Philomath
	Clackamas	3	Beavercreek, Estacada, Molalla
	Clatsop	2	Astoria, Warrenton
	Columbia	3	Clatskanie, St. Helens, Vernonia
	Lincoln	1	Tidewater
	Linn	9	Brownsville, Cascadia, Crabtree, Foster, Harrisburg, Lebanon, Lyons, Mill City, Sweet Home
	Multnomah	0	
	Marion	4	Gates, Idanha, Jefferson, Marion
	Polk	1	Monmouth
	Tillamook	1	Garibaldi
	Washington	0	
	Yamhill	1	Willamina

experiencing, many communities now have substantially older age structures than they did in 1980 (Blahna 1990; OED 1992a). This loss of young people has meant a loss of not only of workers in these counties but of the people most likely to serve as community leaders and volunteers (Blahna 1990).

In interviews, people generally expressed the opinion that the most ambitious and skilled workers were those who left, while those near retirement or with few marketable skills were those who stayed during the population shifts of the 1980s. They further noted that when traditional employers such as mills went out of business or moved, communities also lost a piece of their identity and the civic and philanthropic

functions the business often provided, e.g., sponsorship of local sports and cultural events, scholarships for local high school students, etc. One person described his town as "still struggling to find its identity" after the exodus it experienced early in the decade. Interviewees also expressed concern about the loss of extended family ties that they saw as young families moved away from grandparents and other relatives, citing divorce, child abuse and neglect, and juvenile crime as some possible consequences. Another commented that moving is difficult for many workers, because it means losing friends and family, and "Having connections to other people is what being a human being is all about."

Although outmigration data give some indication of who is leaving an area, they do not show where outmigrants went and what happened to them after they left. I found no studies that traced the movement of workers who left Oregon communities in the 1980s and early 1990s, and interviewees in each district did not know either. At most, they had a general sense that some workers successfully retrained and found work elsewhere or were able to move and find work without retraining, while others moved into the ranks of the homeless or marginally employed. Homelessness among unemployed wood products workers was one concern raised at the Forest Conference (Richardson 1993a).

Implications of immigration patterns

When new people move into an area, they can change its character by bringing in new values, interests, and activities. In district-level interviews, most people offered the opinion that retirees who were moving in generally did not take an active part in their new communities. Recalling Gale's (1991) description of retirement communities in Table 2, the generally observed effects of retirees moving in to an area were effects on property values and demands for senior-related services and recreation. In interviews, community leaders also expressed the concern that a greater number of retired residents could translate into less political and community support for schools and youth services. A survey of residents of six Oregon communities (Cottage Grove, Sweet Home, Toledo, Myrtle Point, Burns, and John Day) in the mid 1980s found that retired residents consistently expressed less support for community public services such as police and fire service, parks, and libraries compared with nonretired residents. Retired residents were also twice as likely to mention taxes as the most important issue facing their community (Weeks 1990).

Not everyone who has been moving into western Oregon is retired. At the Forest Conference, economist Ed Whitelaw from the University of Oregon attributed much of the Pacific Northwest's economic growth outside of the timber industry to the region's environmental amenities, which help to attract new businesses and workers (Richardson 1993a). In their survey of Oregonians' values and beliefs, the Oregon Business Council (OBC 1993) found that newcomers (people who have lived in the state 10 years or less) were, on average, younger than longer term residents. Newcomers were more likely to express support for government services, even at the cost of higher taxes, and were more likely to support the statement "Oregon's economy will move away from logging and will move towards tourist use of forests for camping and hiking." They also expressed more support for the statement "Oregon will have more jobs" than did longer-term residents, which suggests that they are not hostile to economic development (OBC 1993).

In interviews, people discussed changing attitudes towards forest management that they perceived in their communities and in the state in general as a result of immigration. In general, these attitudes are thought to be less tolerant of traditional, intensive forest management practices such as herbicide use and clearcutting, and sometimes of any management of forests for timber. In interviews, farmers and ranchers

expressed concern that this public disaffection for timber management as a land use could expand to include their own farming and ranching operations. Some interviewees also noted tensions and conflict in their communities or among neighbors that they attributed to different values and attitudes between newcomers and longer-term residents.

In interviews with long-time residents of southwest Oregon, Brown (1991) heard similar comments on the effects of immigration in rural areas. She also identified another consequence of immigration, which is the decreasing access that people have to the lands around them as newcomers who have settled in the area enforce private property boundaries:

For decades, people have fished, hunted, gathered mushrooms and berries, cut firewood, or simply used the woods and streams for walking, swimming, or horseback riding. People crossed property lines casually if they knew the owners, or one could simply stop at a place and ask if one could pick blackberries, or go fishing. When the most recent influx of monied transplants came to southwestern Oregon, fences and "No Trespassing" signs appeared everywhere. Property lines became strict barriers to access: crossing them was, for the most part, forbidden. Not only could people no longer go to their accustomed places, but the public areas on the valley floors - parks, trails - became more crowded, and in the estimation of women, not safe (Brown 1991).

This immigration to small towns and rural communities is not a new phenomenon, nor is it unique to Oregon. In interviews, people who had lived in Oregon for several decades traced its beginnings to the "back to the land" movement in the 1960s, and social researchers have studied what they call reverse migration or urban-to-rural migration in remote rural areas across the country. A complementary phenomenon in small towns near metropolitan areas is the development of what Gale (1991: Table 2) terms "commuter residences" and others call "bedroom communities," which are created when urban workers choose to settle at some distance from their place of work. The dramatic population growth in some communities south of Portland (see Salem District Analysis) suggests that this is occurring, and interviewees described the growth of bedroom communities outside both the Portland and Eugene/Springfield metropolitan areas.

Researchers on reverse migration and the urban-forest interface describe community tensions that result from differing attitudes and expectations of new and long-term residents, similar to those that interviewees described in interviews (Blahna 1990; Shands 1991; Shannon 1991). Conflict is not inevitable, however, as Lee (1991) has noted:

Differences in values and beliefs are not necessarily a source of conflict, since newcomers and long-term residents generally occupy separate social circles and tend to communicate only about topics of mutual concern. In addition, disparate values and beliefs do not necessarily mean that the groups must conflict or cannot overcome their differences. Somewhat ironically, the activities that have been most effective in generating a sense of residential community among people who occupy separate social circles have often been inadvertently generated by large public or private land management organizations. Nothing unites the local people like the threats imposed by a large government agency or corporation.

Examples of such alliances between newcomers and long-term residents include opposition to clearcutting in Michigan (Blahna 1990), opposition to wood-fired power plants in California (Fortmann and Starrs 1990), and opposition to timber harvest in the watershed from which a Washington town drew its drinking water (Lee 1991). In these and other alliances, newcomers often contribute communication and

organizational skills, e.g., mobilizing regional and national media and environmental organizations to the community's cause, that increase the effectiveness of the alliance (Lee 1991).

Newcomers can contribute to rural communities in a number of ways. In studying reverse migration in rural Maine, Ploch (1980) documented a revival of local newspapers and artistic and cultural activities and an improvement in health services as a consequence of the contributions of newcomers, all of which were welcomed by most long-term residents. Newcomers' involvement in local politics received approval or suspicion, depending on the political office and other circumstances (Ploch 1980). Ploch also noted the formation of alliances between newcomers and older long-term residents based on a common ideal of rural community life:

These older people, particularly those who were or are small-scale or traditional farmers, tend to see a kind of reincarnation of their own agrarian values in many of the in-migrants. In many cases they view their own children as migrants in place...material goods have become important in their [childrens'] lives, participation in the credit-based modern life-style is enthusiastic and active. [Their children] seem more attuned to the values and norms of urban America than toward traditional local culture. In contrast, many of the in-migrants prefer a much simpler, more old-fashioned, style of life.

Another trend that is just beginning to receive attention from researchers is the migration of poor, urban residents, who often rely on public assistance, to rural areas. Information on this movement remains anecdotal for Oregon and Washington (district interviews and personal communication with Robert Lee, University of Washington), but Fitchen (1993) has begun to document this trend in the U.S.

In summary, research on the social effects of immigration in Oregon and elsewhere shows diverse effects that vary with the natures of the existing community, the immigrants themselves, and a host of other factors that range from perceptions of external threats to the community to the dynamics of the nearest metropolitan area. While interviews in districts identified some of these social effects for some people, they provided only a small glimpse into a complex social process.

Residential development in rural interface areas

In designating Rural Interface Areas in its draft RMPs and articulating specific management policies for these areas, the BLM has recognized some of the changes that are occurring in rural areas as new people with new opinions and expectations of forest management move in. Although interviews and public comment letters showed general support for the BLM in this recognition of the changing social environment in which it works, the policies that the BLM has proposed for rural interface areas have received mixed reviews. (The Stakeholders section of this chapter addresses interests of residents of adjacent lands in the rural interface; the comments below address potential, broader-scale effects of management in the rural interface.)

In particular, State officials, represented by the Oregon Department of Land Conservation and Development (DLCD) in interviews, are concerned about the effects of BLM's Rural Interface policies on timber supply, arguing that the development of forested lands for homesites is removing a significant portion of Oregon's timber base from production. From this viewpoint, by accommodating rural residents who disfavor timber management activities on adjacent BLM lands, the BLM is creating an environment that encourages even more homesite development on adjacent rural lands, causing the withdrawal of more

land from the timber base. Furthermore, such policies are thought to further reduce tolerance and understanding of timber management practices among rural residents, making it that much more difficult for the BLM, private industry, or other forest owners in rural areas to manage their lands for timber. Based on these concerns, representatives of the DLCD thought that the BLM should be working to advocate timber management as a legitimate use of lands in rural interface areas and also to show local governments, who zone adjacent lands for forest or residential use, the consequences of uncontrolled rural development for the BLM and local timber industry's operations.

DLCD representatives commented that some BLM districts and resource areas are taking stronger positions on these rural land use issues than others, which they attributed to differences among managers and senior staff. Coos Bay District reviewers of this report commented:

The Coos Bay District actively participates in and comments to the county planning commissions concerning expanding rural interfaces. Our efforts have resulted in the county requiring the zoning change applicant (for housing in forest zones) to waive protest rights against normal timber practices by adjacent landowners. This helps mitigate the loss of the timber land base from residential development (Memo from Coos Bay District to BLM State Office, November 18, 1993).

BLM rural interface policies are one of several factors, e.g., zoning, property values, social trends, that likely affect residential development in rural areas and its consequences for timber and other resource management activities in those areas. At present, little data is available on the interactions among these factors and the economic effects of rural residential development, so it is difficult to confirm or disprove the State's comments. But these interactions and effects would appear to merit continued attention within districts, given their potential significance.

What population statistics do not show

Census and other population data are best suited to illustrating the condition and movements of people with established residences. They offer little information on the homeless, migrant workers, and the actual movements of people who claim any given address. For example, many district interviewees reported that wood products workers from their communities were spending much of their time travelling throughout the Northwest in search of work while their spouses and children stayed at home. Warren (1992) has described the effects of this disruption in family life among loggers' families on the Olympic Peninsula. Warren focussed on women's means of coping with the increased economic and emotional stress brought about their husbands' absences, family financial uncertainty, fears for their husband and children, as well as the work of being a single parent, which is often combined with paid work outside the home and efforts to support friends and family in the community.

In describing the ethnic makeup of western Oregon counties, the Oregon Employment Division (OED 1992a) noted that minorities are more likely to be missed in census counts than whites, and thus underrepresented in census data. The U.S. Border Patrol estimates that over half of all the workers on Northwest reforestation crews are illegal immigrants (Barnard 1993a). The BLM does require that its contractors follow state and federal labor laws, and also cooperates with the State of Oregon and U.S. Border Patrol to prevent the employment of illegal immigrants on BLM reforestation projects. Employers of seasonal labor in Willamette Valley farms and coastal tourist communities also draw from this pool

of legal and illegal migrant workers (OED 1992a). Interviewees in several districts noted an apparent increase in Hispanic migrants settling in their areas.

Finally, most population data are available on an annual basis, at best, and thus do not show short-term or seasonal changes in population that can have substantial effects in some areas, e.g., in Gale's (1991) retirement and recreation residence communities (Table 2). The section on BLM stakeholders at the end of this chapter describes some of these short-term movements for people who have direct interests in BLM lands in western Oregon.

Employment and income

Factors affecting employment in the timber industry

National economic trends. -- The threat of job losses in the timber industry is not a new one in Oregon. Employment levels have historically been closely tied to regional and national economic trends, which strongly influence demand for wood products. In the past 15 years, the nation has endured two economic recessions that hit the lumber and wood products sector in Oregon early and hard. In the early 1980s, the country entered the worst economic recession since the Depression, and job losses in the lumber and wood products sector in western Oregon numbered in the thousands, while annual unemployment rates exceeded 20% in some Oregon counties (OED 1992a). As described in the district-level analyses, rural, timber-producing regions were among those hardest hit by this recession, and they have taken longer to recover than more urban parts of the state.

Another nation-wide recession affected the Oregon timber industry in 1990-1991: in Lane County, for example, lumber and wood products employment dropped from 11,000 in January 1990 to under 9,000 in January 1991 (OED 1992a). 1990 was also the year in which the northern spotted owl was listed as a threatened species and court injunctions were placed on timber sales from federal lands. This co-occurrence of the recession's effects on demand and the injunctions' effects on supply make it difficult to distinguish their individual effects on timber-based employment in that time period. Harvests of federal sales made prior to the injunctions did continue through the early 1990s, though by the time of the Forest Conference in April 1993, mill owners and forest economists were predicting that federal supplies from these older sales would be exhausted in a matter of months (Richardson 1993a).

Data on timber harvest levels in the early 1990s suggest some recessionary effect. Timber harvested from all Oregon lands dropped from 8.4 billion board feet (bbf) to 6.2 bbf from 1989 to 1990; this drop occurred across every public and private class of forest ownership, not just on federal lands that were affected by the injunctions. Total harvest levels have historically fluctuated with changing economic circumstances in Oregon, dropping from 7.7 bbf in 1979 to 5.7 bbf in 1982 with the recession, then increasing to 8.7 bbf by 1986 with regional economic recovery and strong international demand for wood products (Conway and Wells, in press).

Changes in worker productivity. -- The early 1980s have been characterized as a time of "weeding out" in the Northwest forest industry, so that by the end of the decade only the most efficient mills remained in operation. In addition to the recession, the Northwest forest industry faced increasing competition from Canadian exports and the Southeast, where timber had begun to come on line in the late 1970s (Cook 1993, Greber 1993). In interviews, people described heavy investment and technological advance in the Oregon timber industry during the 1980s in order to remain competitive in international markets. These

technological changes in turn required higher levels of worker training and skill to operate sophisticated, computerized equipment, which brought changes to the types of workers and skills that the industry sought.

From 1980 to 1989, 92 mills closed in Oregon, affecting over 9,000 workers (Ehinger 1993). Some of these closures were permanent, others were temporary as mills were auctioned to new owners or reopened by existing owners. In that same period of time, the number of workers required to process a million board feet of lumber dropped from 4.5 to 2.9 (OED 1992a). Greber (1993) attributes this change in productivity to both mechanization and increasing worker skill levels.

Worker productivity predictions for the 1990s are for stable or increasing employment per board foot processed, based on assumptions of 1) a scarcity of raw material, 2) a surplus of labor, 3) increased emphasis on engineered and value-added wood products, and 4) little capacity for further increasing labor productivity beyond the changes of the 1980s (Greber 1993).

Despite the closure of many less efficient mills during the 1980s, the early 1990s brought a spate of mill closures in Oregon, with higher annual closure rates than during any year of the 1980s. Whether these were remaining undercapitalized mills or more efficient mills that had received substantial recent investment is unclear from the data at hand. In 1990, 28 Oregon mills closed, affecting 2,379 workers; in 1991, 20 mills closed, affecting 2,320 workers; and in 1992, 19 mills closed, affecting 2,937 workers. In May 1993, 208 Oregon mills (including 11 pulp mills) remained in operation (Ehinger 1993).

Non-federal timber supply. -- Even in the absence of changing federal policies towards timber harvest, economists examining Oregon's timber supply have predicted declining harvests and timber industry employment through the end of the decade and into the first half of the next century (Sessions et al. 1991). An exception to this general downward trend, which was predicted to be strongest in the west-side Cascade forests, was in the North Coast Range, where historic fires and early cutting have created a different forest age structure.

In every district in this study, people described "panic" harvesting among non-industrial, private forest owners that they attributed to high prices for logs and fears of future environmental restrictions on their ability to harvest. These people often expressed concern about the effects of this cutting on future timber supply in their region, as they saw their neighbors harvesting young trees or "the seed corn for tomorrow's forests." High prices and harvesters' fears were often attributed to the current forest policy environment in the Pacific Northwest. State farm sale data confirm increased harvests by non-industrial owners in the late 1980s and 1990 (OED 1992a).

This increase in price has, however, benefited private non-industrial and industrial timber owners. Coos Bay District reviewers of this report commented:

Removing federal timber from the marketplace created an increase in the raw product price. This increase led many private woodlot owners and timber companies with land holdings to harvest and sell their timber for a value almost twice the previous level. The increase of value further led these owners to invest significant capital in their land in the form of replanting commercial tree species instead of allowing a natural reseeding of non-commercial trees to occur. These investments will return added value to the landowner and region when the new trees are mature enough to harvest (30 yrs or less). Removing federal timber from the market was a positive

action for many landowners (Memo from Coos Bay District to BLM State Office, November 18, 1993).

Federal timber supply. -- Although the recent past has brought many changes to timber employment in Oregon, the changes brought about by federal land management policies are in some ways unique. Compared with recession-induced job losses in the timber industry, employment reductions due to changing federal forest policies are more obviously permanent in nature. The hope of economic recovery restoring lost jobs in the same industry, as has occurred in previous employment cycles, is absent. Also, a cause-and-effect relationship is clearer to many people between reduced federal timber harvests and reduced employment, compared with the complex economic factors that interact to cause recession-induced unemployment. Mechanization and increasing worker productivity are also less visible processes, and ones that may be reversed with changing economic circumstances.

Employment in the timber industry has already been affected by court injunctions on federal timber sales, which have both curtailed any recovery in the industry from the 1990-1991 recession and added further hardship. Compared with the current situation, the harvest levels in the BLM's RMPs would offer more long-term employment in the timber industry, but at much lower levels than existed prior to 1990 (FEMAT 1993). It is not clear how many permanent job losses have occurred in the past several years compared with the number that have yet to occur once the RMPs are implemented. In interviews, some people thought that the worst losses had already hit their communities, while others thought that the worst was yet to come. Interviewees working in the timber industry were far likelier to predict major future job losses than other community leaders. Industry representatives described short-term strategies such as cutting shifts and importing logs from outside of western Oregon, e.g., Idaho and Montana, that mills and loggers are using to make it through the present period of uncertainty, in hopes of increased harvests once plans are implemented. In their view, not all who were surviving in the short term could continue to do so in the long term under the harvest levels proposed in Option 9 of the FEMAT report.

People familiar with the timber industry also were quick to emphasize that the total volume of sales from BLM lands was not the only factor that could make or break local mills. The mix of wood offered for sale was also considered to be vital, a point FEMAT economists also emphasized (FEMAT 1993). Log diameter and wood quality were both considered important. Many existing mills still require larger-diameter trees to operate, though the industry has begun to make the expensive conversions necessary to process smaller-diameter logs. High-quality wood is vital to much secondary wood product manufacturing in the region, e.g., of doors and windows. The "construction grade" lumber typically produced from lower-quality wood would not supply these secondary manufacturers (FEMAT 1993). Furthermore, some interviewees argued that the Southeastern states have a competitive advantage in the production of lower-quality, construction-grade material, and Oregon mills would not survive if they tried to compete in that market. Thus, people concerned with wood quality care not only about the type of federal timber that would be available to harvest in the short term, but also about silvicultural treatments that would improve the quality of federal timber offered for sale in future decades.

General trends in employment

While employment in lumber and wood products manufacturing and manufacturing in general declined in Oregon during the 1980s, nonmanufacturing employment, especially in trade and services, was a source of employment growth. These state-wide changes in employment reflect the changing place of

manufacturing in the national economy, as increasing worker productivity has limited employment growth and foreign competitors have offered stiff competition to American manufacturers (OED 1992a).

The three largest nonmanufacturing sectors in the economies of western Oregon counties were trade, services, and government in 1990. Counties that drew retirees and tourists during the 1980s, such as those on the coast, often showed particularly strong employment growth in trade and services. Government employment was proportionally higher in areas that had large numbers of state employees, e.g., Salem and university towns, and also in rural areas where federal resource management agencies provided employment. Trade and services are predicted to continue to be strong areas of employment growth in Oregon (Sessions et al. 1991, OED 1992a), but predictions for government, traditionally a stable source of employment through economic cycles, are less certain. Under Measure 5, a property tax limitation bill, state government programs are being cut back. Reduced timber receipts from federal lands affect employment at the federal and local levels. The U.S. Forest Service has announced that it will cut 300-400 positions in Washington and Oregon this fiscal year, reducing its workforce to 6,600, compared with 8,200 in 1990 (Seattle Times 1993b). As detailed in the payments to counties section to follow, employment by some county governments is also in jeopardy.

Another employment concern is that of "ripple effects" from cutbacks in the lumber and wood products industries, as reduced demand and income from workers causes cutbacks in other economic sectors. Economists who have compared the recessions of the early 1980s and 1990-1991 (OED 1992a) and interviewees thought that ripple effects of lumber and wood products unemployment are more muted now than they were ten years ago, mostly because of diversification of local economies in the past decade. This is most true of urban areas, whether Portland or Roseburg; rural towns in which timber is still the primary industry can still be expected to experience large ripple effects of layoffs on local businesses and services.

An additional issue in coastal communities is employment in commercial fishing and seafood processing, which has been low in recent years and is expected to show little recovery in the near future with the listing of increasing numbers of salmon runs as endangered or threatened. For some communities, losses of fishing and timber jobs in recent years have been a double hit to local economies.

Income trends

A study of income in Oregon's "Severely Affected Communities" (Table 5) showed that these communities had higher poverty rates and lower median household incomes than other Oregon communities in 1990 (Seidel 1993). In addition, while real median household income had increased by 5% from 1979 to 1989 in other Oregon communities, it had fallen by 5% in Severely Affected Communities, further widening the gap in income between more prosperous urban areas and poorer rural ones. In a comparison of timber-producing and metropolitan towns in western Washington, Cook (1993) found that the poverty rate of children increased from 12.8% in 1980 to 19.5% in 1990 in timber-producing areas, compared with an increase from 9.8% to 11.4% in metropolitan areas.

An issue for forest-dependent communities and workers is the need for "family wage" employment to replace jobs lost in the timber industry. Manufacturing jobs are, on average, more highly paid than nonmanufacturing jobs, and in 1990, the average annual wage in lumber and wood products manufacturing in Oregon exceeded \$25,000. Annual wages in retail trade were half that amount (just over \$12,500) in the same year. On average, service employment paid well under \$20,000 in 1990, but this

varied with the type of service. Health service workers (a category that includes highly paid professionals) earned an average of \$23,800 in 1990 (OED 1992b). District-level analyses note differences in wages across western Oregon; urban areas typically provide higher average wages.

Tourism and retirement are two major existing and potential sources of employment growth in many rural towns in western Oregon. Other than short-term construction employment, much of this new employment is in low-paying retail trade and service jobs. An additional state-wide trend that is particularly pronounced in some rural Oregon communities experiencing influxes of retirees is the growing importance of transfer payments (mostly medical payments and pensions) and other unearned income to local economies. Economists note that these unearned sources of income, as well as spending by tourists, can buffer the effects of lost earnings on the local economy in times of unemployment (OED 1992a). But high proportions of transfer payments in local economies, documented for counties in the district-level analyses, are often associated with high poverty rates and are indicators of not only growing transfer payments but falling earnings.

Social effects of employment and income trends

Effects on individuals and families. – The record of unemployment in the timber industry in the 1980s provides information on some possible effects of future job losses caused by reduced BLM harvests. But as noted above, the current situation also differs from past periods of unemployment in unique ways. While loggers, millworkers, and their families have been accustomed to cyclical periods of unemployment and developed strategies to weather them (Carroll and Lee 1990; Warren 1992), the current reductions in employment are presented by the BLM as permanent. Not only do they appear permanent, but compared with industry restructuring to stay in business that has also caused long-term job losses, they also appear unnecessary to many wood products workers and long-term residents of rural communities. In interviews, and in hundreds of public comment letters sent to districts, people reiterated that they thought the BLM had done a good job of managing their lands in the past, they did not believe environmentalists' assertions about the need to change forest management practices, and they thought the BLM should continue to manage its lands in the same way it had been.

This perception of unnecessary and uncaring elimination of timber jobs by the federal government and environmentalists is a source of great individual anger and distress, evident in interviews, public comment letters, and comments at the Forest Conference (Richardson 1993a). It is compounded by perceptions of negative stereotypes of loggers and other wood products workers in the media and society at large, as one logger's wife has described:

The media has focused only on the negative. The first thing they want to know when they get here is where is the tavern where all the men go at night to drink. There is this big assumption that loggers are all uneducated, alcoholic, wife beaters or something. They never show the little league games or Sunday church services (Warren 1992).

When questioned about the social effects of unemployment in their communities, interviewees often referred to the early 1980s, as well as more recent periods of unemployment. In addition to people moving out of the area, described in the population section above, interviewees noted increased signs of individual and family distress such as drug and alcohol abuse, depression, family violence and suicides, divorces, single-parent households, home and business foreclosures, and homelessness, which were also noted in the Forest Conference (Richardson 1993a). Lee et al. (1991) have noted that unemployment and

associated stress have been linked to higher levels of mental illness, heart trouble, hypertension, bone and joint ailments, chronic headaches, and impaired cognitive functioning.

Information on what has happened to dislocated timber workers is mostly anecdotal, reporting on individuals or the results of particular retraining programs at best. Determining what has happened to people who moved away from their communities is particularly difficult. One study by the State traced what happened to 6,500 lumber and wood products workers who filed for unemployment benefits in December 1989-February 1990 (OED 1993b). Two years later, 34% were employed full time; of these full-time workers, about two-thirds were working in the lumber and wood products sector at an average wage equal to the average for the industry. Another 22% were working part time; of these part-time workers, about two-thirds were working in the lumber and wood products sector at an average wage of \$16,250. The average wage of all part-time workers was \$13,300. Of the rest, 19% were unemployed, 19% could not be located, and 6% were enrolled in job training programs.

With the continued loss of lumber and wood products jobs, fewer and fewer wood product workers who lose jobs will be able to find new work in the same sector. The FEMAT team (1993) and interviewees noted that different sorts of workers have different types and levels skills and mobility that affect their opportunities for reemployment. Loggers were generally thought to have more transferable skills, given the diversity of tasks they performed and the problem-solving nature of their work. Millworkers and shake and shingle workers generally perform more routine, repetitive tasks that are not as readily transferable to other work, though highly skilled workers, e.g., good sawyers, were thought to continue to be able to find good work, if they were willing to move. People with limited mobility, especially those who provided a secondary source of income in their family, were generally thought to be at the greatest disadvantage in finding new employment.

Community-level effects. — The effects of unemployment are not limited to individuals who lose jobs and their families. The uncertainty of the present situation affects lumber and wood products workers who are still employed, and people who do not work in the timber industry are still distressed by what they see happening to their neighbors. In interviews, city and county officials, among others, spoke with anger and sadness about what they saw happening to people in their communities, echoing remarks at the Forest Conference (Richardson 1993a). They also spoke of stress and burn-out among counselors, the police, church workers, and others in their communities who were dealing with the consequences of stress and unemployment, as did the FEMAT team (1993). Peterson (1979) has noted the symbolic importance of mills in some small, rural communities: independent of its economic importance to local residents, a local mill can be a touchstone for a community's identity, especially when residents feel that identity to be threatened on other fronts, e.g., by an influx of newcomers. Thus, the closure of a mill may be an occasion for widespread community grief.

Recalling earlier discussions of the diversity of forest-dependent communities and the diversity of values and perceptions within forest-dependent communities, one would not expect everyone in a community to react in the same way. For those people who perceive severe environmental degradation on the forest lands around them, unemployment in the timber industry is likely to be viewed as an unfortunate but inevitable consequence of past actions and the need for immediate redress. Comments of this nature were common in public comment letters to districts from both rural and urban residents and among environmentalists at the Forest Conference (Richardson 1993a). These people may perceive federal forest policies that reduce timber harvest levels as an unambiguous moral good, and, if anything, think that the BLM has not gone far enough to promote this good.

Unemployment or the threat of unemployment in the wood products industry can increase tensions and conflict in within communities that are home to people with differing views of environmental issues. At the Forest Conference, environmentalists who work in rural, timber-producing areas spoke of broken friendships and harassment for expressing their views (Richardson 1993a). From interviews with rural, working-class women in southwestern Oregon, Beverly Brown (1991) described another side to community division:

Changing social attitudes towards poor and working-class locals are rubbing sand in raw wounds: Several of my interview subjects complained about the comments popular among the newcomers and the alternative community: "stupid rednecks" is the general gist of it. Casual jokes about how backward and reactionary the locals are can be heard in any crowd of non-locals. I heard a typical one just the other day when a friend said she just didn't want to go to a meeting where she had to "hear the yokels yammering away about jobs." (She was representing a petition to save a parcel of old growth.) The class content of these comments is clear as a blue Oregon sky to a local working class population that already feels trapped by national transitions in wage structure, out-classed and pushed aside by both industry and gentrification in their own home town (Brown 1991).

Yet a third "effect" of unemployment is possible among members of rural and urban communities and that is little or no effect. As Lee (1991) and the FEMAT team (1993) have noted, even small, isolated communities can be made up of several distinct social groups that rarely interact. Thus, it is possible that some people will have little or no direct knowledge of distress and unemployment among their neighbors, and they may notice no personal financial impact of the changing economic structure of their community (e.g., their income comes from transfer payments or non-timber work in a nearby city).

Business and industry

Wood products industries

The sections above describe restructuring in the Oregon timber industry in the 1980s and the interacting factors, including BLM policies, that affect employment in lumber and wood products. A task that remains is to differentiate elements of the timber industry and examine how they may be differently affected by BLM plans, just as diverse forest-dependent communities and people with diverse perceptions and values may be differently affected.

In writing about timber-producing communities in the U.S. in general, Humphrey (1990) has described them as "corporate satellites":

Suffice it to say that a substantial portion of timber production today involves capital owned and managed in large metropolitan centers such as New York City, Seattle, Toronto, and San Francisco. Whatever managerial or white collar class resides in a timber dependent community, therefore, is directly or indirectly tied to corporate activities far removed from a forested area (page 37).

The consequences of being a "corporate satellite" can be good or bad for rural communities, according to different theorists. Some argue that this relationship provides for the mutual economic well-being and growth of rural towns and urban-based corporations while others argue that the relationship is an

exploitative one that impoverishes rural communities. Humphrey (1990) notes that both theories are probably true for different kinds of timber-producing communities, but notes an increasing trend towards instability and impoverishment among Northwestern timber towns since the 1970s.

The major corporations that Humphrey describes, with nation-wide or international timber operations, diversified investments, and often their own private timberlands are those least likely to experience negative effects of BLM policies in western Oregon. These corporations are also not as prevalent as Humphrey's analysis implies. In 1985, mills owned by national companies produced 17% of all lumber and 23% of all plywood in Oregon, compared with 24% of lumber and 43% of plywood in 1978. Regionally and locally owned companies, including worker-owned mills, produced the difference, and regionally owned mills fared best during the recession of the early 1980s (Brunelle 1990).

The differing ownerships of mills can produce different socioeconomic consequences for mill communities. Brunelle (1990) cites a study of Oregon plywood mills between 1980 and 1985 that indicated that locally owned and especially worker-owned plywood plants were more stable employers than absentee-owned plywood plants. Another study that Brunelle cites compared timber industry employment in Washington and Oregon from the mid 1960s to mid 1980s and showed that many smaller firms, in aggregate, produced more stable employment than a few large firms. National companies have, however, been most likely to employ unionized workers at higher wages and benefits than regional and local companies. This began to change during the 1980s, as national companies persuaded unions to agree to wage concessions so the companies could remain competitive with regional and local producers in the Northwest (Brunelle 1990).

Mills that have historically depended heavily on federal timber are expected to be most vulnerable to reduced federal supplies. Even among these, there are likely to be differing effects, however, depending on the unique characteristics of individual mills. Brunelle (1990), notes, for example:

The increasingly important role of smaller firms in the [Northwest forest] industry is significant and reflects a changing orientation. Smaller companies are focused more on recovery of maximum values from each log. Instead of relying on standard commodity products, many independents have taken a more sophisticated approach and are carving out a niche in increasingly specialized and divergent markets. The small owner can use advantages not available to large companies: entrepreneurship, lean management, attention to detail, and ability to convert the logs into the highest-price products (page 120).

Along with sawmills and plywood and veneer mills, pulp and paper mills are a part of the Northwest forest industry. Economists do not anticipate any major effects from reduced federal harvests on these mills, which are further diversifying their sources of supply (OED 1992a, FEMAT 1993). Some public commenters have, however, argued otherwise:

Longview Fibre Company, whose pulp mill at Longview, Washington, and converting plants scattered about the United States, depend upon residuals from many sawmills and veneer mills throughout the Northwest. The many workers in our plants and service industries which supply our operation depend upon us receiving a steady supply of raw materials for our mill (Public comment letter from Longview to BLM districts).

Reduced exports of logs and wood products might affect the economies of port towns such as Coos Bay, which are already being affected by declining commercial fish catches. Some data on exports are

presented in district-level analyses, but they are insufficient for determining the community and regional effects of changes in port activity.

Economic diversity and development

Many forest-dependent communities in western Oregon are actively seeking to diversify their economic bases away from a primary reliance on the timber industry. In doing this, they are following a common American philosophy that equates economic diversity with economic, and sometimes community, stability (Phelps 1992).

A few studies of timber-producing communities in the American West have shown a positive correlation between diversity of economic structure and stability of economic measures of employment and per capita income (Ashton and Pickens 1990, Phelps 1992). These and other studies have cautioned, however, that blanket generalizations about the positive effects of economic diversity are not appropriate (Phelps 1992, FEMAT 1993). For example, diversification of timber-dependent economies through the addition of industries that are tied to the same economic cycles (such as housing starts and interest rates) as the lumber and wood products sector is unlikely to increase economic stability.

District-level analyses describe diversification and development strategies of individual communities in western Oregon, which generally target tourism, retirement housing and services, and light industry. In many communities, economic diversification through the expansion of these sectors is already occurring. Although economic development discussions and literature often portray diversification and development as an unquestioned good, it is a source of change in communities that can be disturbing for some residents, and people may have differing visions of what development in their community should look like. Thus, while some residents may be pleased by the opening of a new mall, business, or industrial complex, others may be equally dismayed by the changes they bring. An influx of franchises of national businesses can be perceived as a threat to the unique character of a town, for example. People are also concerned about the predominance of low wages and seasonal employment in the tourist industry.

"Development" is a term that can mean different things to different people; economic growth is integral to most understandings of development, but "quality of life" issues such as human health and life expectancy, education, and equity in the distribution of resources have also been central to discussions of development. The issues of power and participation that were noted in Chapter 2 for resource management also apply to the diversification and development of rural communities. Different approaches may be used that apportion voice and decisions about development in different ways, e.g., outside planners may design local development projects or local business groups may lead diversification efforts. Any approach that does not include the many different socioeconomic groups that would be affected by development plans will give disproportionate power to those who are included, and may further disenfranchise those who are excluded. For some members of rural, timber-producing communities, economic diversification efforts sponsored by outside interests are perceived as a threat to the culture of their communities (Matthew Carroll, Washington State University, personal communication).

In 1989, the Oregon Economic Development Department began its Community Initiatives Program to assist timber-producing counties and communities in the process of economic diversification. As part of this effort, they conducted SWOT (Strengths, Weaknesses, Opportunities, and Threats) analyses for a number of such communities. Table 6 summarizes SWOT findings for 13 western Oregon communities. One thing to note in this table is the wide variety of social and cultural factors that the OEDD found

important to economic development. The FEMAT team (1993) also concluded that a community's "economic" response to reduced timber harvests or other economic changes depends on many community dynamics beyond the purely economic.

Table 6. -- Summary of SWOT analyses for 13 Severely Affected Communities in western Oregon (E.D. Hovee and Company 1990).

Strengths

- Livability
- Forest resources are a long-term economic asset
- Diverse recreational opportunities
- Commuting distance to larger cities
- Local entrepreneurship
- Affordable housing
- Traditions of volunteerism and community pride
- Residents have anticipated and have plans for adjusting to mill closures
- Community programs for economic diversification
- Unique community strengths, e.g., location, culture, history

Weaknesses

- Isolation from urban economic centers
- Deficient transportation networks
- Lack of suitable industrial sites
- Rural labor force is insufficiently trained for new jobs
- Sales leakage from smaller communities to larger ones
- Contention over the quality and funding of education
- Disappearing medical and social services, despite increasing demand
- Deteriorating appearance of main streets
- Lack of funding and local technical expertise for economic development efforts
- Need for leadership and consensus building among divergent interests

Opportunities

- Retirees
- Tourism and recreation
- Housing
- Cottage industry
- Secondary and value-added wood products
- Retail development
- Services

Threats

- Continued decline and restructuring of wood products industries
- Educational constraints and youth out-migration
- Community inaction
- Lack of consensus
- Absence of pro-active state and federal role

One threat to economic development that the SWOT researchers noted that is of particular relevance to this study is the absence of a pro-active state and federal role in economic development:

It has been difficult for state and federal agencies to be supportive or identify ways in which they can become partners with local communities in making the economic transition that is currently underway...state and federal agencies have often been viewed as being the enemy rather than potential partners in creating economic opportunity. This is partly true due to what becomes an adversarial state and federal versus local role in issues such as spotted owl, forest management plans, land-use planning, funding priorities for state transportation projects, development of parks, and provision of infrastructure for future industrial development (E.D. Hovee and Company 1990, page 25).

The final chapter on opportunities for mitigation offers some suggestions for improving the situation described above, and district-level analyses include examples of ways in which the BLM is already contributing to development efforts in some western Oregon communities.

County revenues, infrastructure, and services

Public forest revenues to county governments

Western Oregon counties depend on revenues from county, state, and federal forests for their operations to varying degrees. Table 7 shows county expenditures and Forest Service, BLM, and state/county forest revenues for western Oregon counties in fiscal year 1991. Time series for federal forest payments to counties show that payments have varied by millions of dollars from one year to the next for some counties in the past 20 years, and even in the past 5 years. A detailed analysis of county budgets and revenues over the past decade or more would provide a much clearer picture of how counties use public forest revenues and which counties are most "dependent" on them, but such an analysis is beyond the scope of the present study.

One aspect of federal payments to counties that has not varied is the relative proportions of O&C monies that counties have received, since these proportions were set in the 1930s and have not been revised since (Bray and Lee 1991). Douglas County receives just over 25% of all O&C receipts returned to counties, followed by Jackson County at 16%, Lane County at 15%, and Josephine County at 12%. The remaining counties receive from 6% to less than 1% of total O&C payments to counties (Association of Oregon Counties). Table 7 shows, however, that county budgets vary greatly, so that a 15% payment of 15.9 million dollars to Lane County can be less important to the overall county budget than a 4% payment of 3.8 million dollars to Curry County, for example.

O&C revenues, unlike most other federal forest revenues, are allocated to counties' general funds with no restrictions on their use, which along with their high monetary value, makes them particularly valuable to county governments (Bray and Lee 1991). In a study of 11 O&C counties in 1990-1991, Lee et al. (1991) found that county law enforcement and health service departments generally received the greatest share of their budgets from O&C revenues. District-level analyses describe some differences among counties in their internal allocation of O&C funds.

The allocation of National Forest receipts in Oregon is determined before it reaches the counties: 75% of receipts go to roads and 25% go to schools, though Curry County and some eastern Oregon counties

Table 7. -- County expenditures and county revenues from forests in public ownership, fiscal year 1991 (Bureau of Governmental Research and Service 1992). Expenditures and revenues are millions of dollars.

District and county	County expenditures	Revenues from USFS*	Revenues from BLM	Revenues from State and County forests	Federal forest revenues as % of county expenditures	Public forest revenues as % of county expenditures
Coos Bay						
Coos	23.0	0.6	6.5	2.6	31%	42%
Curry	15.6	4.7	3.8	0.0	54%	54%
Eugene						
Lane	163.7	29.6	15.9	0.3	28%	28%
Klamath Falls						
Klamath	31.2	13.3	2.6	0.1	51%	51%
Medford						
Jackson					48%*	
Josephine	29.2	2.5	12.5	0.5	51%	53%
Roseburg						
Douglas	64.6	24.3	26.0	0.4	78%	78%
Salem						
Benton	23.7	0.3	2.9	0.5	13%	16%
Clackamas	125.4	0.5	5.7	6.1	5%	10%
Clatsop	12.2	0.0	0.0	1.5	0%	12%
Columbia	11.6	0.0	2.1	1.8	18%	37%
Lincoln	28.7	3.6	0.3	1.1	14%	17%
Linn	35.7	10.1	2.8	0.1	36%	36%
Multnomah	274.1	0.9	1.1	0.0	1%	1%
Marion	94.8	3.8	1.5	0.3	6%	6%
Polk	14.9	0.0	2.2	1.0	15%	21%
Tillamook	13.2	1.9	0.6	2.3	19%	36%
Washington	183.7	0.0	0.6	0.6	0%	1%
Yamhill	19.9	0.5	0.7	0.0	6%	6%

* 1990 value from Lee et al. (1991); county revenues and expenditures were not reported for 1991.

can allocate more than 25% to schools if the funds are not needed for roads (Bray and Lee 1991). Thus, counties that receive large National Forest payments will be particularly affected in these two services as timber receipts fall. In addition to O&C and National Forest timber receipts, which account for the vast majority of federal payments to western Oregon counties, counties also receive federal monies from the Coos Bay Wagon Road Lands (Coos and Douglas counties only) and under several federal acts: the Payment in Lieu of Taxes Act of 1976, the Mineral Leasing Act of 1920, and the Taylor Grazing Act of 1934 (Bray and Lee 1991).

Counties in northwestern Oregon also receive substantial payments from state forest lands, and Coos County owns forest land that it manages for revenue production (Table 7). How revenues from these lands will be affected by federal forest policies is difficult to predict: a restricted timber supply could increase prices and thus revenues from state and county forests. Some people fear, however, that where federal forest managers lead, State and possibly Coos County forest managers will follow, either by choice or through increased public pressure to curtail harvests.

Predictions for federal payments to counties

Federal payments to counties have not yet declined to reflect the decline in federal timber receipts since 1990, due to Congressional "safety net" laws that have assured counties continued federal payments at close to their average annual payments in the late 1980s. (The years used to calculate the average, e.g., 1986-1990 or 1988-1990, and the exact rate of reimbursement, e.g., 85% or 90%, have varied with different laws: USDIBLM 1991, Seattle Times 1993c). Such compensatory payments are likely to be continued in some form under the FEMAT plan: the amount and duration of payments will be significant determinants of short-term impacts on county budgets and services, as will any other state or federal relief monies that may be directed to counties or local service providers.

Another issue in federal forest revenues to counties is that of stumpage price. In their draft RMPs, the BLM predicted that increasing stumpage prices would balance declining harvests so that the BLM's receipts and payments to counties would be slightly higher than the 1984-1988 averages under the preferred alternative (USDIBLM Oregon State Office 1992). The FEMAT team predicted, however, that rising prices would not offset declines in local government revenues under any of the FEMAT options, and southwestern Oregon would be hardest hit by harvest-related declines in payments to local governments (FEMAT 1993). This difference in conclusions is attributable to two major differences between the BLM and FEMAT analyses: 1) the FEMAT team based their analysis on predictions of sharp reductions in timber harvests on all federal lands, while the BLM examined only the effects of reduced BLM harvests on O&C revenues, 2) FEMAT harvest levels for BLM lands under Option 9 are significantly lower than BLM harvest levels under the Preferred Alternative in the draft RMPs.

Impacts on county services of reduced federal revenues

In 1991, Lee et al. issued a report describing the likely effects of reductions in federal timber revenues to 11 O&C counties. The revenue reductions were predicted, along with other socioeconomic consequences, under federal conservation strategies for the northern spotted owl in 1990. In interviews with county officials, Lee et al. examined the probable short-term effects of 10% and 50% reductions in federal timber revenues to each of the 11 counties' departments and programs. These interviews revealed that different counties would follow different strategies. At a 10% reduction in revenues, some counties

would only reduce capital purchases while others would also reduce jobs and service hours or raise fees for county services, directly, or by local ballot. Different county programs would be differently affected, depending on whether the programs were mandated by the state and how much and what sorts of non-timber state and federal monies the programs received, among other factors. In general, nonmandated parks, library, and veterans services programs were predicted to be most affected by a 10% reduction in revenues, followed by county counsel, law enforcement, and juvenile services, which are partially mandated. At a 50% reduction, closer to an across-the-board cut would result, but with greater reductions in nonmandated and partially mandated departments.

In addition to these interviews, Lee et al. (1991) interviewed county health, education, and law enforcement providers to determine how their programs would be affected by reductions in funding and what demands on their services they anticipated as a result of increased unemployment among wood products workers. These results are summarized in district-level analyses. In general, county providers predicted increasing demands on services and reduced service capacities; public health providers estimated at the time of Lee et al.'s interviews that many poor residents in their counties were already lacking needed health care services. State and federal programs officially provide funding for many social programs designed to alleviate unemployment and economic distress, e.g., unemployment, welfare, and Medicaid payments; housing assistance; and worker retraining. But if these funds do not increase in proportion to need or are not readily available to rural residents, local service providers, both public and private, are left to make up the difference as best they can.

By the time of July and August 1993 interviews, many counties had already experienced some declines in federal timber revenues that county commissioners and other interviewees reported to be causing some county governments to cut back services and employment. (The federal "safety net" payments, while important, were still less than counties had received from federal timber revenues in the late 1980s.) Some people also noted that in addition to increased demands for services resulting from unemployment, local service demands were also increasing or expected to increase due to immigration of the elderly and of migrant workers, many of whom would need bilingual services. These comments are summarized in the district-level analyses. Interviewees spoke equally as much, however, about the effects of Ballot Measure 5 in local communities, and many people addressed the combined effects of the Measure and potential reductions in federal payments to counties.

Ballot Measure 5

In November 1990, Oregon voters passed Ballot Measure 5, which required the reduction of property tax to 1.0% of property value as of the 1991-1992 fiscal year for non-school government functions and to 0.5% of property value by 1995-1996 for schools (Bray and Lee 1991). Property taxes have provided about two-thirds of Oregon school funding (Bray and Lee 1991). In fiscal year 1991, property taxes provided 24% of Oregon counties' revenues, compared with 17% from federal land revenue-sharing (Bureau of Governmental Research and Service 1992).

In interviews, some people expressed the opinion that assessments of property values would be increased to offset Measure 5 effects. In reviewing this report, the Coos Bay District noted "The most recent tax statements would indicate the assessed value of property, or at least residential property has increased substantially. Although not scientifically validated, district employees indicated an average increase of approximately 20% in their property values over the past year" (Memo from Coos Bay District to BLM State Office, November 18, 1993). The degree to which changes in assessed property values may mitigate

the effects of Measure 5 on government and school revenues remains unclear, however, and may well vary among different localities.

Much discussion of the effects of Measure 5 has focused on education. State-funded universities have cut programs and raised fees, while a recent survey of Oregon school districts by the Confederation of Oregon School Administrators showed that districts plan to lay off about 1,100 teachers this year and cut back elective and athletic programs in middle schools and high schools (Seattle Times 1993d). In 1988-1989, schools in Douglas, Curry, and Klamath counties received about 10% of their funding from National Forest receipts; other western Oregon county schools were less dependent on these funds (Bray and Lee 1991). Some western Oregon counties also allocate money from their general funds and O&C revenues to schools (Lee et al. 1991).

Individual and business taxes

As local governments lose federal timber revenues and are constrained by Measure 5 in collecting property taxes, some are also finding that their tax base is shrinking with declining property values, increasing unemployment and poverty, outmigration of workers, and the closure of mills and other local businesses. Some of these effects, e.g., of mill closure, are most strongly felt in individual cities and towns, rather than at the county level. Timber harvested in western Oregon is also subject to a state yield tax that could provide decreasing revenues to the state as harvest levels drop.

Loss of infrastructure in small communities

Along with declining government revenues and services, community infrastructure and services can be affected by the changing incomes of its residents, as described for rural hospitals in the Coos Bay District Analysis. The loss or reduction of public and private infrastructure and services during times of economic hardship can impede economic development efforts aimed at attracting new businesses and income sources to a community. The centralization of services through the closure of branch offices, which some counties are planning in the face of reduced revenues, and which also occurs during periods of regional growth, has been linked to the decline of small communities (Phelps 1992).

Stakeholders

Most general discussions of federal forest management and its socioeconomic consequences in the Pacific Northwest focus on timber, as much of this study has done as well. This is not inappropriate, given the economic, environmental, and cultural importance of the timber industry in the region, but this focus is not conducive to seeing the entire picture, i.e., all that a forest can mean to people and the place it can take in their lives. By looking at the many different ways people use BLM lands, one at least gains a starting point for a more holistic socioeconomic analysis.

Several general conclusions about human uses and values for western Oregon BLM lands can be drawn from the district focus group and public comment data.

- 1) People use BLM lands for many different purposes, of which timber is only one.

- 2) Many of these non-timber uses contribute in some manner to individuals' livelihoods and to local economies.
- 3) In general, local residents of BLM districts receive the greatest quantity of tangible and intangible benefits from BLM lands. Thus, they are most likely to be strongly affected, positively and negatively, by changes in BLM resource management practices; the direction and intensity of the effects will vary with their personal uses and values for the lands.
- 4) Although one may expect to find the greatest socioeconomic effects of the RMP at the local level, people who are affected, in some way, by BLM resource management in western Oregon span the nation and the globe.

Timber management stakeholders

Different groups of people are employed in different aspects of timber management and processing. The earlier section on social effects of unemployment differentiated among loggers and mill workers of varying skill levels. Other groups who work directly in timber management include truckers and others working in log transport, road building and maintenance contractors (who are sometimes also logging contractors), and site preparation and reforestation crews. Mechanics and machine shops, equipment suppliers, nurseries, and state and local forestry officials are among those who are also supported by federal timber management activities.

Table 8. -- Timber management activities on western Oregon BLM lands (from focus groups in BLM districts).

harvesting (cat, horse, helicopter, cable logging)
planting/reforestation
pruning
road construction
salvage logging
seed orchards
site preparation
stand maintenance
thinning (commercial, precommercial)
timber transport

Districts differ as to how much of their timber is processed in-district or transported to mills outside of the district. For the most part, however, local and regional loggers, millworkers, and road contractors work on BLM lands. Site preparation and reforestation workers are a different group: many crew members are Hispanic workers, either migrants or recently settled in western Oregon. About half are estimated to be illegal aliens, which provides work for immigration officials and the Border Patrol (Barnard 1993a). Many of their supervisors are people of Russian heritage who settled in the Willamette Valley, but negotiate reforestation contracts throughout western Oregon. Reforestation crews are likely to work on precommercial thinning contracts, while loggers are likely to work in commercial thinning. Thus, an emphasis on silvicultural treatments in the RMPs might provide employment for either group. Some people have suggested that herbicide treatments be replaced by manual brush control on BLM lands to reduce chemical inputs into the environment and to provide employment for local forest workers: it

seems quite possible, however, that such work would be done by regional reforestation/site prep workers rather than local loggers, given the current division of labor. It should also be noted that wages and benefits for most reforestation workers are notably less than those for loggers and mill workers.

The Oregon Forest Products Transportation Association made the following observation in a public comment letter sent to District offices:

The Oregon forest products transportation industry is composed of nearly 7,000 trucking firms, almost all of which are family-owned and operated. Including employees, this industry is comprised of nearly 40,000 people. We are seldom, if ever, included in forest products industry "employment" figures. The O&C timberlands are a major source of work for our members. Any reduction of timber available has the direct result of unemployment among our member firms and, in the case of the one-truck owner/operators, this can be fatal.

Other public comment letters indicated that people who have a stake in timber management in western Oregon are not limited to that geographical area. Longview Fibre Company (quoted in the wood products industry section above) noted the importance of Northwest timber harvest to their mills across the country. A grass-roots organization in eastern Oregon also noted:

Although Wallowa County has little BLM land, the impact of a reduction on harvest levels anywhere in the Northwest have (sic) a negative impact on local timber supply and social services (Public comment letter to districts).

Finally, trade in wood products is international, and reductions in Northwest harvests could have two important effects on people around the nation and the world. The first is an increase in prices due to diminished supply, and the second is increased cutting in other parts of the world to compensate for reduced harvests in the Northwest. FEMAT economists note that prices for softwood lumber are expected to increase in coming decades, and would do so even at much higher harvest levels than are proposed in any of the FEMAT options (FEMAT 1993). They also note:

The United States is expected to remain a net importer of softwood products. It does not appear that the federal sales policies will lead to large changes in wood products importation. Canada is the primary source of these products.

Despite such assurances, public comment to the BLM and to the FEMAT team from a wide range of interest groups: timber, environmental, community, etc., spoke of fears of overcutting and environmental degradation in forests in other parts of the world as a consequence of declining federal harvests in the Pacific Northwest (Richardson and Deagan 1993). Particular concern was noted for forests in British Columbia, Alaska, and Siberia, as well as in tropical countries that do not practice reforestation.

Special forest products stakeholders

As Table 9 shows, non-timber or "special" forest products are collected on BLM lands for both personal use and commercial distribution. While collection of forest products for personal use in the Northwest is a centuries-old tradition among Native Americans and non-native settlers, many people perceive commercial collection of these products to be something quite new. Almost three decades ago, however, the Forest Service noted:

Special forest products are economically important to many people living in rural areas. Many families either make or supplement their income by picking or cutting these hidden treasures...Special forest products provide about \$15 million annual income to growers, pickers, or cutters in Oregon and Washington. Financial and employment benefits are multiplied when the raw products pass through the hands of people in related industries such as processing, transportation, wholesaling, retailing, construction and exporting (USDAFS Pacific Northwest Region 1965).

What is new in special forest products collection in the Northwest in recent years is the scale and intensity of collection, the social groups involved, and the types of products that are collected.

Table 9. — Special forest products collected from western Oregon BLM lands (from focus groups in BLM districts).

Mostly commercial use	Mostly personal use
beargrass boughs (cedar, fir, oak, Port Orford cedar) burls (madrone, maple) cascara bark cedar bolts and shakes cones ferns firewood greens huckleberry brush juniper berries manzanita branches moss mushrooms myrtlewood Oregon grape poles Port Orford cedar wood posts salal wild plants yew wood yew bark	berries Christmas trees decorative rock firewood mushrooms poles posts wild plants

Compared with harvests by rural families that the Forest Service described in the 1960s, out-of-area collectors now join, and sometimes compete with, local collectors of forest products in the Northwest. The most clearly defined social group that emerged from the focus group discussions was Southeast Asian (often Cambodian) beargrass collectors, who are based in Washington State (often Tacoma) but harvest beargrass throughout western Oregon, especially in Districts on the I-5 corridor. Another distinct group of collectors is itinerant mushroom gatherers who reportedly make their living travelling around the Northwest, often following recent fires, which promote the growth of some fungi. Recent Asian and Hispanic immigrants are, in general, thought to be many of the new collectors of special forest products

in the region, but anecdotal evidence suggests that unemployed wood products workers are also adding to the numbers of commercial collectors.

Mushrooms, floral greens, and Christmas ornamentals form the largest share of Northwest special forest products markets (FEMAT 1993). Pacific yew bark demand has dropped off with the development of synthetic taxol, but other products such as Oregon grape root and cascara bark also have pharmaceutical uses. One source estimates that over 150 non-timber products from Northwest forests are harvested commercially (Western Forester 1993).

In 1989, Schlosser et al. (1991) surveyed producers in the floral greens and Christmas ornamentals industries west of the Cascades in Oregon, Washington, and southern British Columbia. In that year, the industry consisted of 60 businesses, located mostly in Washington, which employed 10,300 full- and part-time workers and harvesters. Wages, salaries and payroll taxes were estimated to be \$23.8 million in that year, and the total value of products sold was \$128.5 million. About 54% of greens and ornamentals were marketed in the U.S. or Canada, outside of the state in which they were collected. Much of the North American market is in the eastern states and provinces. Another 24% was exported to Europe, and 4% was exported to Pacific Rim nations. Only 17% of greens and ornamentals were marketed in their state of collection in 1989. Focus group data suggest that collection of these products, especially floral greens in general and beargrass in particular, has increased notably in the past several years, so this 1989 data most likely underestimates current employment and product values.

The FEMAT team estimated that the value of edible mushrooms harvested in western Oregon and western Washington in 1992 was \$11.4 million. Combined with floral greens and ornamentals, the 1993 special forest products harvest was valued at over \$70 million, and provided employment to 28,000-30,000 individuals (FEMAT 1993). A recent Seattle Times article claimed that "wild mushrooms have created a \$35-million-a-year industry for the Pacific Northwest -- about \$6 million for Washington," but did not cite a source or define the geographic extent of the "Pacific Northwest" (Macdonald 1993). The article also stated that most Northwest matsutakes are exported to Japan, while most Northwest chanterelles are exported to Germany.

Some public comment letters have emphasized that the value of matsutakes, for which harvesters can be paid as much as \$70 per pound (Macdonald 1993), can exceed the value of the timber from the stands in which they grow. This observation has been used in arguments against timber harvests west of the Cascades; however, matsutakes are also known as pine mushrooms from their association with lodgepole pine and other pine species (Molina et al. 1993). Pine forests are more common on the eastern slopes of the Cascades than on most of the western Oregon BLM lands considered in this study, although mixed conifer forest that include pine species do occur in southwestern Oregon (Franklin and Dyrness 1973).

The high value of mushrooms and other crops and the increasing interest in them has contributed to conflicts among collectors and rampant rumors about the dangers of the work, after news of two murders of mushroom collectors in southern Oregon and reports of armed robberies and near misses were made public or travelled through the grapevine (Macdonald 1993; interviews, and focus groups). Despite the high drama currently attached to the collection of special forest products, employment and harvesting opportunities are generally seasonal; processing jobs are low-paying, lacking in benefits, and often part-time; and harvesters' incomes can vary with luck (i.e., if they find what they're looking for), price variations, and annual variations in production. For most people, harvesting and processing of special forest products remain supplemental sources of income (Schlosser et al. 1991; FEMAT 1993; Molina et al. 1993).

While commercial collection of special forest products generally receives the greatest attention in current discussions, collection of some of these same products for personal use should not be considered unimportant. Some researchers have argued that easy access to natural resources, e.g., for collecting firewood, mushrooms and berries, and also hunting and fishing, has allowed a much better life for low-income residents of rural areas, and a researcher in southwest Oregon commented:

When those resources become off-limits or unaffordable, those benefits vanish, and others become harder and more expensive to get: for instance, one must drive a long way -- and spend money for the gas and car -- to get to the woods to go fishing or hunting or gathering. The quality of life nosedives for low-income people, even if paychecks stay the same (Brown 1991).

Fish and wildlife stakeholders

Table 10 shows a variety of fish and wildlife management activities that focus group participants identified as occurring on or related to BLM lands. Some, such as animal control, trapping, and fish improvement projects provide employment and income to a few local residents, while recreational hunters and anglers form a much larger group. Hunters are mostly local and regional residents, according to focus group participants, but anglers are thought to come from around the country and the world to fish some western Oregon streams. Focus group participants considered trout, salmon, and steelhead fishing to be one of the strongest contributors to local economies of the many sorts of recreation supported by BLM lands. FEMAT economists offer support for this statement, noting that in 1990 fishing ranked first in expenditures per visit (\$30.65) among a set of twelve recreation activities on federal forest lands in the FEMAT planning area (FEMAT 1993). The total number of angler visits in 1990 was much less, however, than the number of visits for sightseeing by car; picnicking, nature study and other day-use visits; and camping. Thus, estimates of total visitor expenditures on these sets of activities exceeded the estimated \$179 million spent on fishing in 1990 by \$19 to \$1,463 million dollars. (Researchers estimated 75,000 annual visits for motorized sightseeing at expenditures of \$21.91/visit, compared with 5,800 annual fishing visits, thus the wide spread in total value. Annual camping visits were estimated at 11,500 and annual picnicking/nature study/other day-use visits at 14,700.) Of an estimated 50,000 to 80,000 full-time equivalent jobs supported by recreation on BLM and Forest Service lands in the FEMAT planning area, 4,000 to 5,000 are thought to be directly related to recreational fishing (FEMAT 1993).

Table 10. -- Fish and wildlife management activities on BLM lands in western Oregon (from focus groups in BLM districts).

animal control
commercial fishing
fish ponds
fish habitat improvement projects
hunting (bear, deer, elk, grouse)
placement of rehabilitated animals
recreational fishing (coastal, coldwater, and warmwater)
trapping
wild horse management

These FEMAT estimates cover a wide geographical area, and it is quite possible that at smaller scales, anglers make a much greater contribution to local economies than other recreationists. Focus group

participants mentioned historic resorts and inns in rural areas that are supported almost solely by recreational anglers. In addition to spending more money, anglers visiting from outside the region are also thought to make longer visits than most other recreationists.

Commercial fishing and seafood processing form a large enough share of coastal economies that they are included in descriptions of county employment and income for the Coos Bay and Salem districts. In 1991, fish landings in northern California, Oregon, and Washington supported an estimated 5,000 full-time equivalent workers in fish harvesting and processing. Less than 10% of these jobs were thought to be supported by commercial salmon fishing, due to current low catches of salmon and an industry trend away from salmon and tuna production towards groundfish and shrimp (FEMAT 1993). Salmon are most directly affected by BLM forest management activities, so a long-term shift away from their harvest could translate to a general reduction in BLM effects on commercial fisheries.

Some people have argued, however, that federal forest management is one of the causes for this shift, which has brought economic and emotional distress to salmon fishermen, their families, and their communities, and which has been compared to current distress among timber-producing families and communities in the Northwest (Richardson 1993a). Watershed protection and restoration projects designed to help restore threatened and endangered salmon stocks are a critical portion of the FEMAT team's proposals for Northwest forests (FEMAT 1993).

Infrastructure and water stakeholders

Table 11. -- Infrastructure and water supply uses of BLM lands in western Oregon (from focus groups in BLM districts).

agricultural and irrigation water supply
communication sites
county transfer station
county park leases
domestic water supply
gas lines
heliports
hydroelectric developments (proposed)
leases for houses, cabins
municipal water supply
pipelines
powerlines
reservoirs
rights of way
roads (construction and maintenance)
runways
water diversions

Local residents of BLM Districts are the primary beneficiaries of many infrastructure and water uses of BLM lands, shown in Table 11. Utility corridors and communication sites may serve a larger geographic area. Little is written about the economic value of these land uses, but it is likely substantial, if measured by the cost of locating or relocating them on private lands.

A clean water supply is fundamental to the maintenance and growth of a region's population and economy, and the costs of treating contaminated water or importing water can be high. Many people benefit from some of these uses, e.g., utility corridors and municipal water supplies, with no knowledge of the role that BLM lands play in providing the service. Others, mainly rural and rural interface residents, are very conscious of the BLM's effects on their domestic water supply, rights of way to their houses, and even the leases for land on which their homes are built, judging from public comment letters. These rural residents are likely to be most affected, for good or ill, by BLM management that affects their daily, household uses of water and roads.

Illegal activities

In general, focus group participants expected illegal uses of BLM lands listed in Table 12 to increase under the new RMPs, for several reasons. By reducing timber management activities, more lands would be available for people seeking untrafficked areas for drug labs or marijuana plots, and fewer timber workers would be out in the forest to notice suspicious activities. (The potential increase in the numbers of special forest products collectors on BLM lands was not considered in this observation.) The amount of enforcement by the BLM and other agencies would, of course, affect these trends. As people lose employment, it was also thought that more people would be "living off the land," which could include illegal occupancy of BLM lands and poaching. Arson could come to be very profitable for some, if it opens land for salvage sales that otherwise is closed to harvest. Destructive behaviors such as vandalism and arson could also serve as releases of anger and frustration among people embittered by federal land policies and other socioeconomic changes that cost them their jobs, families, or ways of life.

Table 12. — Illegal uses of BLM lands in western Oregon (from focus groups in BLM districts).

arson
bungee jumping
drug labs
dumping
marijuana plots
poaching
pot-hunting (at archaeological sites)
squatting
unauthorized shooting
vandalism

Some of these illegal activities are highly profitable, e.g., sales of drugs and archaeological artifacts, although even ballpark estimates of profits are difficult to ascertain. In 1990, 159 marijuana gardens were eliminated on BLM lands in Oregon and Washington, and 179 gardens were eliminated in 1991. The total street value of those crops was estimated at \$18.6 million in 1990 and \$23.8 million in 1991 (USDIBLM 1991). These figures, of course, represent only a portion of the potential total value of marijuana raised on BLM lands in those years.

Given focus group opinion that locals may be the main growers of marijuana on BLM lands, it is possible that in some areas, this could be an important, if generally unacknowledged, part of some rural economies. Thus, BLM policies that affect drug production might also have some effect on local economies, if changing profits cause producers to change their purchases of locally sold goods and

services. While these economic effects would be quite difficult to trace, the costs of law enforcement, property destruction, and cleanup (including hazardous waste sites) associated with illegal activities could be more readily ascertained. The potential for violence among illegal users and against law officers, BLM employees, and other users of BLM lands might also change with changes in BLM management that affect illegal activities.

Other commercial stakeholders

Focus group participants mentioned a variety of other commercial uses of BLM lands, which fall into three basic categories: grazing, energy and mineral uses, and environmental restoration projects (Table 13). Movie-making and military exercises have little in common with other uses, though they both can involve battalions of out-of-area visitors. Local expenditures by film crews were reported to be in the millions for recent productions in some Districts.

Grazing is a relatively minor use of western Oregon BLM lands, though it is important in the Klamath Falls Resource Area. Of the western Oregon districts, Medford provided 97 leases for 31,344 animal unit months (AUMs) in 1990 and 81 leases for 18,368 AUMs in 1991; the other Districts each provided well under 1,000 AUMs and 16 or fewer leases. For comparison, BLM districts in eastern Oregon, including lands in the Klamath Falls Resource Area, provided 1,300 permits and leases for over 1 million AUMs in 1990 and 1,400 permits and leases for 730,000 AUMs in 1991 (USDIBLM 1991). RMP changes in riparian protection and grazing seasons could increase costs and/or decrease profits for local residents, mostly adjacent landowners, who graze cattle on BLM lands, but the extent of any such economic effects for individuals is unknown.

Table 13. -- Other commercial and management activities on BLM lands in western Oregon (from focus groups in BLM districts).

cleanups of illegal dump sites
coal, oil, and gas exploration
geothermal uses
gravel and rock quarrying
grazing
juniper removal
military exercises
mining (gold, nickel, silver)
movie making
reclamation projects
wetland restoration

Commercial mining in BLM districts consists mostly of small-scale placer mining for gold that is thought to provide supplemental or subsistence income to individuals and families, and rock and gravel quarries that provide material for BLM and local government roads and some local employment. BLM lands in western Oregon do have geological potential for larger-scale mineral and energy developments. Small-scale gold miners anticipate negative effects under the RMP from several occupancy rules and from the withdrawal of some lands on which claims are filed from future commercial mining activity. In public comment letters, individual miners and miners' associations stated that rules proposed under the RMP regarding issues such as occupancy of sites, working hours, leashing of pets, and sewage disposal were

unrealistic, given the nature of miners' work, and also unfair, since they did not apply to other users of BLM lands.

With the exception of hazardous material sites, environmental cleanup and restoration projects generally provide employment for local contractors, according to focus group participants. Such projects are anticipated to continue or increase under the RMPs, depending on funding.

Environmental restoration received attention at the Forest Conference as a potential source of employment for displaced wood products workers. The Pacific Rivers Council is developing a "comprehensive, region-wide watershed protection and restoration program" that is estimated to provide 50,000 person-years of employment over a 10-year period (Richardson 1993a). The Council also surveyed displaced Oregon and northern California wood products workers who were in retraining programs this past summer and found strong interest in watershed restoration: 75% of 200 respondents would be interested in a career in watershed restoration, and 80% would have been interested in watershed restoration training, had it been available when they selected their retraining program (Barnard 1993b; Paul Hoobyar, The Pacific Rivers Council, personal communication).

The Forest Service has noted a potential for 2,500 jobs in stream and watershed restoration on its Oregon and Washington lands in the next 3 years, and the potential for 3,800 other jobs related to other ecosystem restoration activities (FEMAT 1993). Comparable figures for the BLM are not given. Funding for such work remains uncertain, however, as do the wages that would be paid workers and the length and seasonality of employment. Some restoration jobs would involve reforestation-type work, which, as noted previously, is not highly paid. It is also likely that the first beneficiaries of new contracts would be existing employers and workers, not those who have lost jobs in the region.

Recreation stakeholders

Most of the recreational activities listed in Table 14 are enjoyed by local and regional visitors to BLM lands. Rafting and sightseeing also draw out-of-state visitors, according to focus group participants. In Oregon in general, tourism is recognized as the second or third largest industry, depending on the measure used, and it has been growing rapidly in recent years. Out-of-state visitors generated about one-third of all tourism visits in 1991, but they were responsible for 52% of all tourism revenues in the state (Wetter and Associates 1993). Tourism is especially important to the economies of coastal Oregon counties.

As noted above, FEMAT economists and focus group participants identified fishing as the most economically valuable recreational use associated with BLM and Forest Service lands, in terms of expenditures per visit. Camping (which focus groups noted was often associated with fishing) ranked second at \$27.17 per visit. Expenditures associated with OHV use, "motorized sightseeing," hunting, wildlife watching, boating, canoeing, rafting, snowmobiling, and other winter sports ranged between \$20.50 and \$22.75 per visit. The lowest expenditure activities, at well under \$10 per visit, included hiking, horse riding, biking, and swimming (FEMAT 1993).

Data on demand for different recreational activities can be difficult to interpret. The FEMAT team notes that there is unmet demand for "primitive and semiprimitive nonmotorized opportunities" in federal forests in the Northwest. It also notes that "Driving for pleasure is the most demanded recreational activity on federal lands," but observes that more of this demand for motorized recreation is currently

being met. Public comment letters to districts, however, noted demand for OHV trails on BLM lands. And studies of recreational activity among people of different age groups show a marked decline in participation in active, outdoor recreation activities, e.g., hiking or skiing, with increasing age (Marcin 1993). Thus, recreation demands will likely be affected by the aging of the populations in many western Oregon communities, described in the population section.

Draft RMPs for western Oregon districts include increased restrictions on OHV and snowmobile use. These restrictions benefit other recreationists who prefer not to share areas with these users, but negatively affect these people. At least some snowmobile and OHV users are also wood product workers and other rural residents who are already experiencing negative effects of curtailments in federal harvests. Thus, while restrictions on OHV/snowmobile may provide net environmental and recreation benefits, they may also compound the losses of those who will be most negatively affected by the RMP.

Table 14. -- Recreational uses of western Oregon BLM lands (from focus groups in BLM districts).

all-terrain skateboarding and other potential new activities bicycling bird watching camping (by homeless as well as recreationists) canoeing caving drift boating hang gliding hiking horse riding kayaking lake boating mountain biking off-highway vehicles (motorcycles and 4x4s) paintball wars paragliding photography picnicking rafting recreational mining rock hounding rock climbing sightseeing skiing snowmobiling star gazing swimming target shooting tubing water skiing wildlife watching windsurfing

"Priceless" resources

Table 15 lists some uses of BLM lands that cannot be priced, that represent intangible human values of culture, knowledge, spirit, and beauty. Although this list is small, in actuality, all uses of BLM lands carry at least some of these values for stakeholders, regardless of any economic values that may also be involved. Northwest forests and rivers hold the stories, memories, and hopes of individuals, communities, cultures, and societies: for Native Americans, rural residents and forest workers, scientists, recreationists of every type, and urban dwellers who may never visit them. Thus, when most people speak of their deepest knowledge of Northwest forests and the strongest effects they will experience from changes in federal land management, they do not speak in scientific and economic terms, but in words of the heart such as "heritage," "legacy," "beauty," and "love."

My people, my family are forest people. We love the beauty of the forests; we respect it, It's part of what we are. We have a heritage in the forest. Buzz Eades, logger.

These great forests do define the character and culture of the Northwest. They are part of our heritage, but they also ought to be part of our legacy, the legacy that we leave to our children and grandchildren. Bill Arthur, environmentalist.

There are days when I think I really know something about these forests, and what I think I know is that these are the most spectacular, most magnificent forests on earth. Rick Brown, forest ecologist.

[On leaving the Forest Conference] We unite as family, and we begin to do the work that lets us leave a legacy of love for our natural resources to be enjoyed in perpetuity by all humans yet to walk this earth. Ted Strong, Native American (Richardson 1993a).

Table 15. -- Cultural, educational, aesthetic, or spiritual resources and activities on BLM lands in western Oregon (from focus groups in BLM districts).

archaeological sites
historical home sites and trails
lighthouse sites
Native American reservations (potential)
Native American collection of forest products for traditional uses
Native American religious uses
nature study and education
research and monitoring
visuals
wilderness

Native American stakeholders

Native Americans, as residents of western Oregon and users of BLM lands, are members of all the stakeholder groups described above, and some uses unique to Native Americans are included in Table 15. Table 16 lists federally recognized tribes with interests in the western Oregon planning area. Most federal treaties and executive orders that affect western Oregon tribes do not provide off-reservation rights for fishing, hunting, gathering, or grazing, unlike treaties with some eastern Oregon and Washington tribes. In western Oregon, only the Confederated Tribes of Siletz have off-reservation rights for fishing, hunting, and gathering. These rights were established within the Lincoln County area by a 1980 court decree. East of the Cascade crest, the Klamath Tribe has rights on its former reservation lands in the Winema National Forest. The Confederated Tribes of Warm Springs, whose reservation is on the eastern slope of the Cascades, have off-reservation treaty rights and claim interests in much of the eastern Salem District. The federal government, including the BLM, maintains a trust relationship with the governments of all the tribes listed below, and the BLM is required to consult with tribal governments about actions that will affect tribal interests.

In a July 1993 interview, Sue Shaffer, Tribal Chairman of the Cow Creek Band of Umpqua Indians, noted that members of her tribe would be most strongly affected by the RMPs in the same ways that other, non-native residents of the area would be: through changes in timber industry employment, education, and county services. In a November 1992 letter to districts, the Tribal Council and Planning Committee of the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians also noted that "the Tribes are critically concerned about the local economies within the Tribes' territory." Particular concerns of the Klamath Tribe are noted in the Klamath Falls Resource Area chapter.

Table 16. -- Federally recognized Indian tribes with interests in the western Oregon planning area.

Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians
Confederated Tribes of Grande Ronde
Confederated Tribes of Siletz
Confederated Tribes of the Warm Springs Reservation
Coquille Indian Tribe
Cow Creek Band of Umpqua Tribe of Indians
Klamath Tribe

COOS BAY DISTRICT ANALYSIS

The Coos Bay District on the south coast of Oregon includes nearly all of Coos and Curry counties, and part of Douglas County. County-level economic and population data are presented in this chapter for Coos and Curry counties; the Roseburg District Analysis covers these data for Douglas County. Chapter sections appear below.

Population

Employment and income

- Recent trends

- Social effects

Business and industry

- Wood products industries

- Economic diversity and development

County revenues, infrastructure, and services

Stakeholders

- Local stakeholders

 - Local recreation stakeholders

 - Local forest product stakeholders

 - Other local stakeholders

- Regional stakeholders

 - Regional recreation stakeholders

 - Regional forest product stakeholders

 - Other regional stakeholders

- National and international stakeholders

Population

From 1980 to 1990, the population of Coos County fell by 6%, the largest drop for any county in Oregon and the only decline among counties west of the Cascades. People left both Coos and Curry counties in the early and mid 1980s because of severe unemployment in the timber industry, but in Curry County, those leaving were outnumbered by retirees moving in, so that the county population grew almost 14% from 1980 to 1990. The populations of all cities and unincorporated areas in Coos County declined in the 1980s, with the greatest numbers leaving Coos Bay and Coquille, and the greatest proportional change in Powers, which lost 16.7% of its population. In contrast, Brookings in Curry County grew by 30%, and the more populous unincorporated areas of the county grew by 12% (OED 1992a).

By 1988, outmigration from both counties had mostly run its course, and immigration of retirees had begun to dominate population trends. Coos County gained 2,500 people from migration in 1988-1990, compared with a net loss of 8,700 people in 1980-1987. Curry County, in which in- and outmigration roughly balanced each other in 1980-1987, experienced most of its growth late in the decade (OED 1992a). The Coos Bay District noted that population data through July 1993 showed that Coos County was gaining in population, as were the communities of Coquille and Powers that lost residents in the 1980s; in Curry County, slight declines in population had been noted (Memo from Coos Bay District to BLM State Office, November 18, 1993).

These dramatic population shifts have not gone unnoticed by community leaders, who described a number of social effects in their communities. The people who are moving in are perceived to differ in wealth, age, and attitudes from those who have been leaving, illustrated by one interviewee's informal survey of moving companies in Coos Bay, which showed about seven households leaving each week in U-Haul trailers and small rental trucks, and one household arriving each week in large Mayflower moving vans. While interviewees reported that demand for housing associated with the influx has helped people moving out to sell their homes, they also noted that there is a shortage of housing for people in lower income brackets, given high rents in the area.

As wood products workers have left, they have been replaced by people with other sources of income who are less likely to view forests as a source of income and revenue and more likely to protest logging. A Coos County Commissioner reported increasing disputes between neighbors about logging on private lands and increasing calls to the county concerning clearcuts in county-owned forests. Another interviewee reported a shift in the community motivation from seeking growth to maintaining the status quo. Many immigrants are buying farms for home sites or hobby farms, which signals another shift in local land use.

Coos Bay District reviewers of this report added the following comment, which echoes some of the observations in the sections on Rural and urban values, perceptions, and cultures and Population in the second and third chapters.

The Coos Bay District area covers a major portion of the southern Oregon coastline. This region has experienced a dramatic increase in non-timber related workers and retirees that have come to the coast to "live the good life." They often bring their beliefs "that the forests should be covered with standing trees, and the scenic beauty should remain as it is", without regard to the impact on timber and mill workers. In fact, many new arrivals may prefer to have the mills and pulp/paper plants close to remove the large trucks from the roads and the odor from the air.

Newcomers have a different view of the Oregon Coast than local people that work in a mill or in the woods getting the timber out. Most newcomers have left metropolitan areas that have intensive or excessive development to the point of reducing the quality of life to a combative "rat race." They see this area as an opportunity to return to a better way of life. In essence, many newcomers do not support exploitation of natural resources.

Newcomers generally purchase land and housing at a higher value than the locals, and pay greater levels of taxes. Usually this is due to newcomers leaving high priced metropolitan areas for low priced areas on the Oregon Coast. Also, newcomers usually do not demand expansion of normal community and county infrastructure such as schools, police, fire, welfare services, and roads; due to their financial position, lack of school age children, maturity/age, and social status (retired or semi-retired) (Memo from Coos Bay District to State Office, November 18, 1993).

In interviews, people mentioned poor employment opportunities for young adults, which make it difficult for them to settle or stay in the area. In 1990, Curry County had the highest proportion of people over 65 and the lowest proportion under 18 in the state. Coos County also had an older population than the state. In 1990, the median age in Curry County was 44.0; in Coos County it was 37.6, and in Oregon it was 34.5 (OED 1992a). As a result, interviewees reported that children of third and fourth generation families are leaving their communities, and extended family ties and traditions are being stretched or broken; young people who stay often must depend on their families for financial support.

Table 17. -- Demographic data for Coos and Curry counties (U.S. Bureau of Census). All percentages are percent of total population.

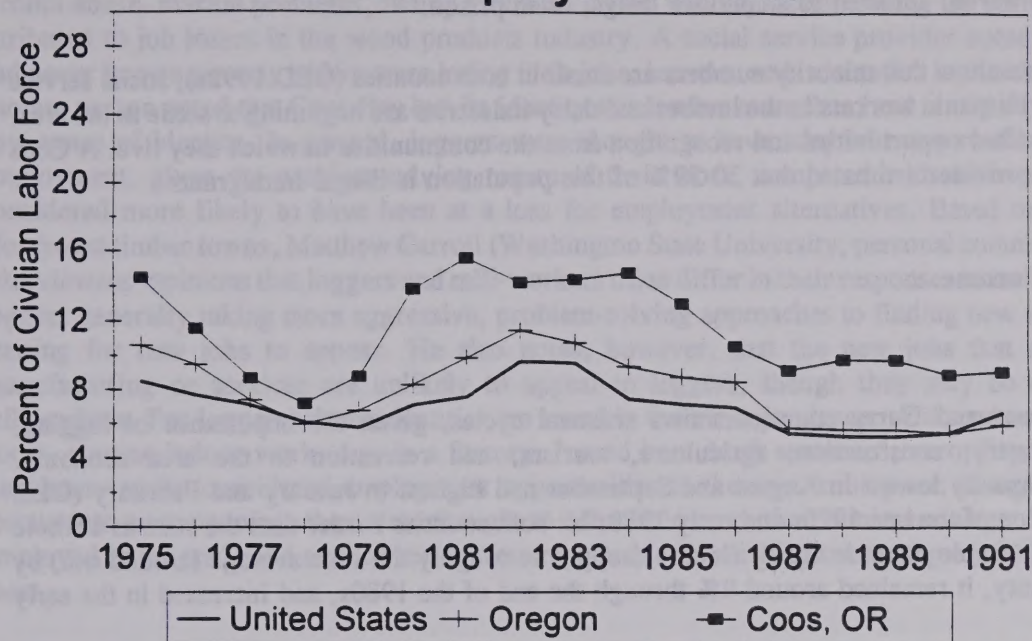
Demographic measure and county	1970	1980	1990
Total population			
Coos	56,515	64,047	60,273
Curry	13,006	16,992	19,327
Urban population			
Coos	51.3%	49.1%	52.4%
Curry	20.9%	36.7%	23.1%
Population 65+			
Coos	9.1%	12.0%	17.3%
Curry	10.7%	16.9%	24.5%
Persons who moved into county since 1985			
Coos			25%
Curry			37%
Persons below poverty level			
Coos	10.3%	10.5%	16.5%
Curry	13.3%	12.2%	12.4%

Table 18. -- Income data for Coos and Curry counties (U.S. Bureau of Economic Analysis). Percentages are percent of total personal income.

Income measure and county	1970	1980	1990
Total personal income (Millions of 1987 dollars)			
Coos	\$561.2	\$769.4	\$785.6
Curry	\$117.1	\$212.2	\$257.8
Per capita income (1987 dollars)			
Coos	\$9,862	\$12,036	\$12,985
Curry	\$8,935	\$12,423	\$13,193
Income from transfer payments			
Coos	11.5%	17.4%	22.9%
Curry	13.1%	18.8%	24.8%
Income from lumber and wood products sector			
Coos	27.6%	16.8%	8.2%
Curry	28.2%	16.8%	7.9%

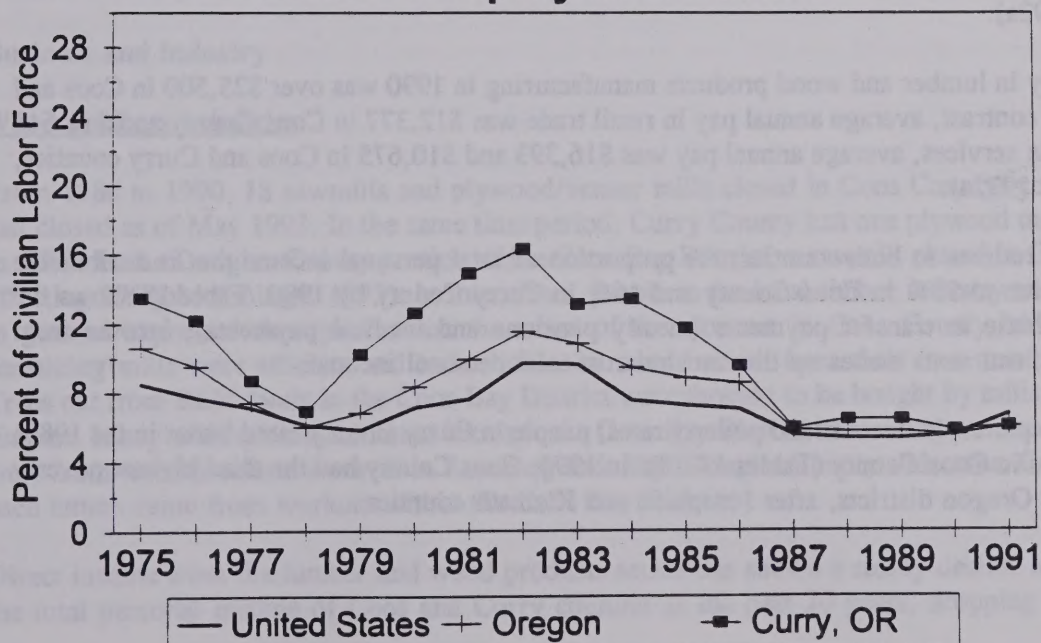
Figure 1. -- Unemployment rates for Coos and Curry counties (Bureau of Labor Statistics).

Total Unemployment Rate



Note: County estimates are less reliable than state estimates due to estimation procedure.

Total Unemployment Rate



Not all who left the area in the 1980s found stability elsewhere, especially if they had few skills or unrealistic expectations. Several interviewees told stories of workers who had "fallen through the cracks" after leaving their communities and not finding stable, well-paying work: ending up homeless, estranged from spouse and children, addicted to alcohol or drugs, or in prison.

Although census data show that minority numbers are small in both counties (OED 1992a), social service providers note that Hispanic workers in the lumber and dairy industries are beginning to settle in the area, though they face limited opportunities and recognition from the communities in which they live. A Coos Bay social service provider estimated that 30-50% of this population is illegal immigrants.

Employment and income

Recent trends

Employment in Coos and Curry counties shows seasonal cycles, given the importance of logging, transportation, forestry, construction, agriculture, tourism, and recreation to the area economy. Unemployment is usually lowest in August and September and highest in January and February (OED 1992a). The recession of the late 1970s and early 1980s hit both counties harder than the state as a whole (Figure 1). While unemployment in Curry County dropped to roughly the state average (around 6%) by 1987, in Coos County, it remained around 9% through the end of the 1980s, and increased in the early 1990s.

Job losses from 1980 to 1990 were greatest in lumber and wood products manufacturing in both Coos and Curry counties, dropping from 3930 to 2370 jobs in Coos County (40% reduction) and 890 to 740 jobs in Curry County (17% reduction) over the decade. In Coos County, another 960 jobs were lost in several economic sectors (food products manufacturing, construction, transportation, finance, and government) over the decade, and 1180 jobs were created; 85% of new jobs were in trade and services, and the remainder were in manufacturing. Curry County, in contrast, experienced employment growth in all basic economic sectors other than lumber and wood products; 79% of new jobs were in trade and services (OED 1992a).

Average annual pay in lumber and wood products manufacturing in 1990 was over \$25,500 in Coos and Curry counties. In contrast, average annual pay in retail trade was \$12,377 in Coos County and \$11,648 in Curry County; in services, average annual pay was \$16,393 and \$10,675 in Coos and Curry counties, respectively (OED 1992a).

With the influx of retirees to both counties, the proportion of total personal income that is attributable to earnings had fallen to 59% in Coos County and 46% in Curry County by 1990. Table 18 shows the corresponding increase in transfer payments (mostly pensions and medical payments); income from dividends, interest, and rents makes up the remainder of total personal income.

In terms of average per capita income and poverty rates, people in Curry County fared better in the 1980s than their neighbors in Coos County (Tables 17-18). In 1990, Coos County had the third highest poverty rate in the western Oregon districts, after Josephine and Klamath counties.

Social effects

In addition to the outmigration of workers, discussed above, interviewees recalled increases in drug and alcohol abuse, marital problems, family violence, crime, and depression during the early 1980s that they attributed to job losses in the wood products industry. A social service provider noted that people who had never known poverty before were losing their jobs, income, and orientation in that time period, while another person noted that Coos Bay lost its identity as a lumber town then, and is still struggling for some new sense of identity. In general, loggers were thought to have adapted more readily to finding new employment, given the problem-solving nature of their work, compared with millworkers, who were considered more likely to have been at a loss for employment alternatives. Based on his research in Northwest timber towns, Matthew Carroll (Washington State University, personal communication) shares interviewees' opinions that loggers and mill-workers often differ in their responses to unemployment, with loggers generally taking more aggressive, problem-solving approaches to finding new work, rather than waiting for new jobs to appear. He also notes, however, that the new jobs that are appearing in manufacturing or services are unlikely to appeal to loggers, though they may be readily taken by millworkers. For loggers whose identities are based in their independence, skill, and work in the out-of-doors, routine indoor work, e.g. in a factory, "could be a death sentence", according to Carroll. Coos Bay interviewees considered employment opportunities in the area to be poor: though new stores and restaurants were opening, they were thought to offer little more than minimum wage. People who were employed in the trade and service sector were reported to be working two or three jobs just to make ends meet.

The interview data cited in this section, like the interview data cited throughout this chapter, represent the opinions of a small sample of community leaders in the Coos Bay District. While some of these opinions are tested against other data sources presented in this chapter and the Western Oregon Analysis chapter, for the most part, information needed to confirm or revise these opinions still needs to be collected at the district level. Districts could collect and analyze much of this information themselves, through examining their own records and obtaining information from local governments, businesses, and service providers.

Business and industry

Wood products industries

From 1980 to 1990, 18 sawmills and plywood/veneer mills closed in Coos County; no additional mills had closed as of May 1993. In the same time period, Curry County lost one plywood mill at Gold Beach in 1989. In the Douglas County portion of the Coos Bay District, a sawmill closed in Gardiner in 1992, affecting 275 jobs (Ehinger 1993). In interviews, people in the local timber industry and the community in general expressed the opinion that the worst of the closures in Coos County had already passed: remaining mills were efficient and had reliable sources of wood, from their own or other private lands. Trees cut from BLM lands in the Coos Bay District were thought to be bought by mills in Roseburg and Eugene. Many of the public comment letters to the Coos Bay District advocating continued timber harvest were from wood products workers in Roseburg and other Douglas County addresses. Comparatively few such letters came from workers within the Coos Bay District.

Direct income from the lumber and wood products sector has shown a steady decline as a proportion of the total personal income of Coos and Curry counties in the past 20 years, dropping by roughly 50%

from 1980 to 1990 (Table 18). From 1990 to 1992, log exports through the Port at Coos Bay dropped from 233 to 112 MMBF (Scribner Scale), as some of the major private companies reduced log exports in favor of domestic processing (Ehinger 1993). Informants did not mention declining log and wood product exports as a source of economic strain in the Coos Bay; however, data from the Port show that log and wood products comprised all exports in 1992, and export levels dropped 20% between 1991 and 1992 (Table 19).

Interviewees reported greater timber harvest volumes from small, nonindustrial forest owners in the district in recent years, with rapid increases in the past six months. State economic analysts note an increase in timber harvest from private farm woodlands between 1988 and 1990 in Coos and Curry counties (OED 1992a). Informants attributed these private harvests to high prices for logs and also to private landowners' fears of export and environmental restrictions that could prevent future profitable harvests.

Table 19. -- Waterbourne commerce in Coos Bay for 1992. All wood products are outbound. Inbound commodities included nickel ore, petroleum, and commercial fish landings (Oregon International Port of Coos Bay 1993).

Commodity	Short tons (thousands)	Value (thousands of dollars)	Change in tonnage since 1991
Lumber	402.7	\$143,800	-25%
Logs	542.2	\$81,330	-33%
Plywood	57.5	\$32,400	-22%
Particle board	4.0	\$950	
Linerboard/pulp	90.0	\$34,200	-8%
Woodchips	2694.2	\$178,493	-17%
Total outbound	3790.6	\$471,173	-20%
Total inbound	341.0	\$95,100	52%
Total traffic	4131.7	\$566,273	-17%

Economic diversity and development

An analysis of non-farm earnings by economic sector in 1989 showed that manufacturing and government each accounted for roughly 20% of the total non-farm earnings in Coos and Curry counties. Trade and services each accounted for another 15-20% of total earnings, so that, when combined, those four economic sectors accounted for over 70% of non-farm earnings in both counties (OED 1992a).

Agriculture and commercial fishing, which are not included in non-farm earning analyses, are also important to the economy of Coos and Curry counties. The counties' major crops are cranberries and nursery stock; livestock and livestock products (including dairy) contributed roughly a quarter to a third of total farm receipts in the 1980s (OED 1992a). Gross sales from Coos and Curry county farms in 1990

were \$61.6 million; the value of the commercial seafood catch in Coos and Curry county ports in the same year was \$27.4 million. Charleston and Brookings took in over 80% of this catch; in all, ports in the two counties took in 37% of Oregon's commercial seafood catch in 1990 (OED 1992a).

Manufacturing in both counties is dominated by lumber and wood products; seafood processing is the next most important manufacturing industry, in terms of numbers of jobs. Fishing and seafood processing income and employment have suffered from competition from other fisheries and restrictions on harvests in recent years, and are anticipated to continue to do so (OED 1992a).

What economic growth has occurred in Coos and Curry counties in the past decade has been primarily in nonmanufacturing sectors and driven by the influx of tourists and retirees. Trade, services, and, in Curry County, construction have led economic growth (OED 1992a). Economic development strategies for the Coos Bay-North Bend-Charleston Bay Area and the community of Coquille target tourism as a major source of future economic growth, along with light and cottage industries, and in the Coos Bay area, the port (CCAGED 1991; Bay Area Chamber of Commerce 1992). Southwestern Oregon Community College has also been providing retraining opportunities for displaced woodworkers since the closure of the Georgia-Pacific mill in Coquille.

County revenues, infrastructure, and services

Coos County is unique among western Oregon counties in its ownership of county forests that provide significant revenue to the County (\$2.6 million in 1991, equal to 11% of county expenditures [Table 7]; \$4.3 million in the most recent fiscal year [Gordon Ross, Coos County Commissioner, personal communication]). In 1991, Coos County was even more dependent on revenues from BLM lands, which were equivalent to 28% of county expenditures. Curry County, which has been highly dependent on federal forest revenues in recent years, received almost half of its public forest revenues from the BLM in 1991 (Table 7).

In 1990-1991, health and law enforcement departments were estimated to be most dependent on O&C revenues in Coos and Curry counties, receiving from 10 to 18% of their total budgets from O&C monies. As a consequence of declining revenues in Coos County, satellite health clinics were projected to close and preventative programs (sex, drug, and alcohol education) to be cut. The prenatal care program was also at risk, though private physicians had decided to guarantee prenatal care to all county residents. Similar health service cutbacks were predicted in Curry County, as were increases in fees to increase revenues. Law enforcement officials in Coos County anticipated increases in alcohol and drug abuse, domestic violence, and property crime; capital improvements would be delayed. Predictions for Curry County were similar, but also included over-crowding in jails, more homeless people wandering up and down the coast, possible cancellation of capital improvements, and cutbacks in officer training and continuing education (Lee et al: 1991).

In a December 1992 letter to BLM districts, the Elkton School District Board of Directors noted that over the past 2 years, their revenues from federal forest receipts had dropped from \$90,000 to \$70,000. Also faced with reductions in revenue from Measure 5, the District eliminated music education at all grade levels, cut one full-time teaching position and two instructional assistants. Furthermore, students were likely to be affected by other cutbacks in County services, given their reliance on the County library system and county roads for bus routes; the county road department also has helped the district by resurfacing a school parking area and bus lane and charging them only for materials. (As noted in the

section on county revenues in the Western Oregon Analysis, BLM revenues are paid to county general funds, and the distribution of those funds to schools and other county programs is decided by county officials. Forest Service revenues, in contrast, are paid directly to school and road funds.)

In interviews in the summer of 1993, people expressed concern that the BLM's timber harvest reductions could contribute to increasing public demand for similar reductions in Coos County and State-owned forests, which would further reduce county revenues in western Oregon. In addition to the services listed above, Coos County was reported to direct some of its O&C funds to the road department for fish enhancement projects, which could be cut with declining revenues, thus counteracting some of the RMP's environmental benefits. Informants expressed particular concern for local schools, which are already subject to budget cuts under Ballot Measure 5, and which are direct recipients of revenues from State-owned forest trust lands as well as federal forests.

The Administrator of the Lower Umpqua Hospital in Reedsport described significant impacts of the Roseburg and Coos Bay RMPs on her facility beyond reductions in federal revenues to counties. These effects were driven by the projected loss of local timber jobs that would contribute to 1) the outmigration of insured workers and their families, 2) increases in uncompensated care to impoverished, uninsured families staying in the area, and 3) the immigration of retirees relying on Medicare, replacing insured workers who left. Medicare/Medicaid payments to health providers are lower than those provided by private insurers, and a shift in population that increases reliance on these forms of payment reduces revenues to health providers. As a consequence, it becomes increasingly difficult to recruit and retain doctors and other health professionals and to provide quality care. From 1989 to 1993, insurance payments dropped from 34% to 24% of the Lower Umpqua Hospital's revenue, and Medicaid payments increased from 11% to 21% of total revenue. The hospital is also Reedsport's third largest employer and is considered critical to the attraction of new, non-timber businesses by the city. Thus, any reduction of the hospital's financial soundness could affect local employment and economic diversification efforts, as well as health services (Sandra Reese, Lower Umpqua Hospital, personal communication and letters to districts).

Stakeholders

The following discussion of Coos Bay stakeholders is drawn from the focus group with District employees in August 1993, which produced the information in Table 20, and from public comment letters sent to the District Office about the Draft RMP by December 1992. This analysis provides "best guesses" about the people who are most directly affected by BLM land management in the Coos Bay District. It can be used as a starting point for more in-depth analyses, which were beyond the scope of this study, but it should not, in itself, be considered entirely conclusive. The focus group also revealed rapid recent changes in resource use on BLM lands, e.g., in special forest products collection and new forms of recreation, that could alter the stakeholder groups over the next several years.

Local stakeholders

Local recreation stakeholders. -- Locals are thought to be the primary users of Coos Bay BLM properties for warmwater fishing and lake boating, hiking, some camping, some hunting for big game (deer, elk, bear), most hunting for upland birds and small game, and recreational mining. With the exception of camping, which is mostly weekend use, other activities are thought to be day-use. Although some of these

activities support local sporting goods retailers, in general their main benefits to local residents are non-economic. Visitors from outside the district are thought to dominate other recreational uses of BLM lands, described below, but locals no doubt participate in some of these activities as well.

Local forest product stakeholders. -- While purchasers of the greatest volume of Coos Bay District timber are based outside of the district, according to focus group, interview, and public comment data, some people living within the district still depend on Coos Bay timber management activities. There are still some mills in the district that use federal timber, e.g., Roseburg Forest Products in Coquille, and the focus group and public comment letters indicated that some "minor" tree species from BLM lands are important to local woodworkers and small mills. Local mills use Port Orford cedar to manufacture arrow stock, and district staff note that about 90% of wooden arrow shafts manufactured in the U.S. come from Coos County. Local woodworkers use myrtlewood and maple burls. Locals also harvest wood for cedar shakes and posts. While the major timber purchasers are based outside of the district, they still contract with some local, family-run logging companies and local silviculture/site prep workers for work in the district. Focus group participants thought that all of these activities provided full-time employment and income for local workers. In addition, locals were thought to earn supplemental income from the collection of greens, mosses, mushrooms, and firewood. Some people collected firewood commercially; more often it was for their personal use.

Other local stakeholders. -- Other uses of Coos Bay BLM lands by local residents include small-scale mining, which provides part-time income for a few people, and rock quarries, which provide material for road building and maintenance and jetty repair. Private landowners have rights of way across BLM lands, and the BLM across private lands, and local domestic and agricultural water users may be affected by BLM management. Small, local contractors benefit from occasional employment on fish habitat improvement projects. Grazing is another minor use of BLM lands. Local Native American tribes claim religious and prehistoric sites within the District. Illegal activities on Coos Bay BLM lands, for which it is more difficult to determine who the users are, include illegal dumping, marijuana plots, drug labs, and trespass of firewood, boughs, and other special forest products.

Regional stakeholders

Regional recreation stakeholders. -- Waterfowl and big game hunting and coldwater and coastal fishing are thought to attract people from outside of the Coos Bay District, and provide income to local guides. Regional anglers also use drift boats, charter boats, and stay in local B&Bs and resorts, while hunters are thought to be the main group of campers on BLM lands. Both groups support sporting goods suppliers within the district and elsewhere. Windsurfers, canoers, and kayakers have been visiting the district in increasing numbers in recent years, as have road and mountain bicyclists. At this point, none of these newer recreational users are thought to contribute much to the local economy on their visits. Under the RMP, the District will be developing an archaeological/lighthouse site interpretive center at Gregory Point that they anticipate will be a destination site for visitors to the area. Sightseeing, photography, and nature study in the District also draw regional interest, judging from out-of-area public comment.

Regional forest product stakeholders. -- A number of forest products were thought to be collected by people from around the Northwest. In addition to major timber purchasers in Roseburg and Eugene, loggers and silviculture/site prep workers on Coos Bay District lands include people from Woodburn, Portland, Medford, California, and migrant Hispanic workers. Other forest products of commercial interest to regional collectors included mushrooms, Port Orford cedar boughs, and yew bark, though

interest in the last was expected to decline or disappear with the development of synthetic taxol. Focus groups participants thought that these three forest products provided supplemental income to most collectors, though for some people, particularly wholesalers, they were thought to be a primary source of personal income.

Other regional stakeholders. -- Commercial fishermen and seafood processors in the region are indirect users of BLM lands and waters in the Coos Bay District. Pipelines, powerlines, and communication sites on District lands also serve the region in general, as do research and study sites.

National and international stakeholders

No specific examples of extra-regional stakeholders, i.e., people outside of western Oregon or adjacent areas of northern California, came to light from the focus groups or public comment letters. However, markets for Coos Bay forest products extend well beyond the region, and people supported by timber management activities in the district, e.g., nurseries, equipment manufacturers, state and federal forestry and labor officials, are not limited to the local area or region.

Table 20. -- Human uses of Coos Bay District BLM lands: results of July 1993 focus group. These preliminary data are "best guesses" of focus group participants. Question marks and empty cells indicate areas for further study.

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Mushrooms	Migrant pickers, locals (mostly recreational picking), shifting to outside commercial pickers, a few wholesalers	9 months/yr	Picked commercially since 1985	Provides a livelihood for a few people, but supplemental income for most	More regulations, increased enforcement, bilingual permit system; expect increases in harvest as timber harvests decline
Beargrass	Very minor use	Seasonal (?)	?	Not much	"
Port Orford cedar boughs	State-wide collectors (a shift from earlier local use)	Christmas/ winter	Long time - activity has increased a lot in the past couple of yr	Provides a livelihood for a few people, but supplemental income for most	"
Yew bark	State-wide collectors	Harvest will almost disappear with synthetic taxol development	Last couple of yr	"	Demand from pharmaceutical companies will decline or stop, but no RMP effect
Port Orford cedar wood	Local mills use this wood for arrow stock (archery)	Year-round	1930s and 1940s	Full-time incomes	More regulations, increased enforcement; expect increases in harvest as timber harvests decline; may see more use of other woods, e.g., willow and alder
Myrtlewood	Local woodworkers	"	"	"	"
Maple burls	"	"	"	"	"
Cedar shakes	Locals	"	"	"	"

Table 20 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Posts	"	"	"	"	"
Greens/mosses	"	Seasonal	"	Supplemental income	"
Firewood	"	Year-round	Long time	Heating source, some people are commercial gatherers	Cost of firewood will increase, expect more substitution, e.g., pellets for firewood
Fish habitat improvement projects	Small, local contractors, government biologists	Sporadic		Short-term employment for a few	More projects undertaken, depending on funding
Mining	Subsistence users, recreational miners, mostly local, some out-of-state; potential for sand, chromium, platinum, and nickel developments		1853	Part-time living for a few people	Costs of mining will increase, but demand will also increase with more unemployment
Native American reservation (potential)	Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians - timber, prehistoric and religious sites	Little Native American use of land since 1856			
Fishing - inland warmwater	Locals	Day use, not much		Not much	State regulations and fees will become more complex and expensive (not a result of BLM action)

Table 20 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Fishing - inland coldwater	Guides and regional anglers	Seasonal, longer than day use	Use has increased a lot in past 5 yr	Guides, resorts, B&Bs, sporting goods stores	" and less riparian cleaning will improve fish habitat, but reduce boat access and passage
Fishing - coastal	Regional and commercial fishermen, for fish and shellfish	"	Commercial fishing since 1860, charter boats since 1950s	" and commercial fishermen's jobs	Inland habitat for anadromous species will be improved on BLM lands
Hunting	Regional hunters for waterfowl and big game, local hunters for upland birds and small game	Elk - all season, otherwise day use in season	Significant increase since the 1930s-40s; may plateau soon (seems near a saturation point)	Guides, store owners	Big game populations will decline with fewer clearcuts; road closures will affect access and poaching; expect more law enforcement for poaching (not RMP)
Drift boating	Regional guides and anglers	Salmon season	Last 10 yr	Income for guides in coastal rivers	Rivers may be less accessible/navigable with decreased riparian cleaning
Lake boating	Locals	Day use	Has increased since 1970s	Not much	More recreation emphasis
Windsurfing	Regional (especially from Portland)	Day/weekend use	Last 5 yr	Good potential in some areas, little so far	May be asked to provide windsurfing access points
Canoeing/kayaking	"	"	Increased use in recent yr	Not much	More recreation emphasis

Table 20 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Hiking	Mostly local, some regional and out-of-state	Day use, not much	Recent	Not much	Some opportunities for trails
Biking	Regional - road and mountain bikers	Day use	Last 10 yr	Not much, some specialty shops	Less logging traffic will improve biking safety and opportunities
Camping	Mostly from out-of-district, though some local; often big game hunters	Weekend, except for Loon Lake (2 wk)	1950s	Not much	Observing increased interest in Old Growth camping; RMP will increase recreation emphasis
Timber harvesting	District employees; purchasers are mostly from Roseburg, then Eugene, a few locals; loggers work in family-run outfits from the local area, Roseburg, Medford, Eugene/Springfield, and California	Year-round (formerly in dry season)	Commercial harvests in area since 1850s	Lots of economic benefits: full-time, good-wage incomes, and ripple effects through the area economy	Significant decrease in quantity harvested: smaller, more mobile equipment will be needed for smaller cuts or selective cuts
Secondary timber employment	Equipment vendors, dealers, and mechanics; state and local forestry officials; OSHA officials; immigration office; border patrol	Year-round	1850s and since, with new laws creating new jobs	"	Possible increase in specialty products and small mills, as in the 1950s
Road construction	Same as loggers	Dry season	1850s	"	Little new road building, but maintenance and renovation of bridges and culverts will be needed

Table 20 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Precommercial thinning and fertilization	Locals, and crews from outside the area - Eugene, Woodburn, Portland	Year-round	Since 1940s and 50s		More pruning and thinning will be done in young stands
Site preparation and planting	Hispanic crews, both migrant and from the local community; nurseries from Washington to California	Year-round	"		Planting and burning will decrease; site prep procedures will change with fewer clearcuts; manual maintenance may increase
OHVs					Road closures or less road maintenance will reduce opportunities
Sightseeing, photography, outdoor education, wildlife viewing		Anticipate increasing demand			Will receive more emphasis
Rights of way and road use	BLM across private land, private landowners (timber industry and others) across BLM lands	Occasional requests from private landowners			BLM requests and road use will decrease; granting rights of way will be made more complex by spotted owl rules
Pipelines, powerlines, communication sites					Business as usual

Table 20 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Rock hounding		Minimal use			No change expected
Water rights	Domestic and agricultural users				No change expected
Fire management and fish ponds					No new construction
Grazing		Minor use			Little change
Marijuana plots and meth labs					Less activity in forests will provide more potential sites
Rock quarries	Road building and maintenance, jetty repair				Will become historic as road maintenance declines
Illegal dumping					Expect increase with higher landfill fees (not RMP)
Heliports					No more construction
Wilderness	Squaw Island Wilderness Area, Zwagg Island & North Sisters Rocks Wilderness Study Areas, off the coast				No change
Research and study sites					No change in Research Natural Areas, but more study sites

Table 20 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Archaeological sites				Potential multi-million dollar development at Gregory Point	Will develop Gregory Point interpretive center - major site, anticipate it will be a destination site
Lighthouse sites					Have acquired Gregory Point, anticipate acquiring Cape Blanco; both have strong recreation potential
Seed orchards					No change
Coal, oil, and gas			Some historic uses		Will be restricted by spotted owl reserves

EUGENE DISTRICT ANALYSIS

The Eugene District, which stretches from the Cascade crest to the coast in central western Oregon, includes nearly all of Lane County, some of Linn County, and a small portion of Douglas County. County-level economic and population data are presented in this chapter for Lane County; the Salem District Analysis covers these data for Linn County, and the Roseburg District Analysis covers Douglas County. Chapter sections appear below.

Population

Employment and income

- Recent trends

- Social effects

Business and industry

- Wood products industries

- Economic diversity and development

County revenues, infrastructure, and services

Stakeholders

- Local stakeholders

 - Local recreation stakeholders

 - Local forest product stakeholders

 - Other local stakeholders

- Regional stakeholders

 - Regional recreation stakeholders

 - Regional forest product stakeholders

 - Other regional stakeholders

- National and international stakeholders

Population

With well over a quarter million residents in 1990, Lane County was the third most populous of Oregon counties, following Washington and Multnomah counties in the Portland metropolitan area (Tables 21, 33). This was true despite a net loss of 13,500 residents from 1980 to 1986 as a consequence of two recessions in the early 1980s. By the end of the decade, Lane County as a whole had recouped its losses to experience a net growth in population, which was concentrated in urban areas. Unincorporated areas experienced a decline in population from 1980 to 1990 (102,367 to 98,406), as did the towns of Dunes City (1,124 to 1,081), Oakridge (3,680 to 3,063), and Westfir (312 to 278: OED 1992a).

In interviews in Eugene, people voiced the opinion that the more educated and ambitious people were the ones leaving the area, due to lack of career opportunities, while those who were staying were either choosing quality of life over their careers or lacked the motivation and skills to market themselves in another region. This was considered to apply in general and to workers in the timber industry, the more mobile of whom were heading to the Southeast or Alaska. With the exception of the town of Florence, interviewees did not consider the region a strong draw for retirees compared with other parts of Oregon, but retirees were still thought to be moving in in small numbers, especially from California.

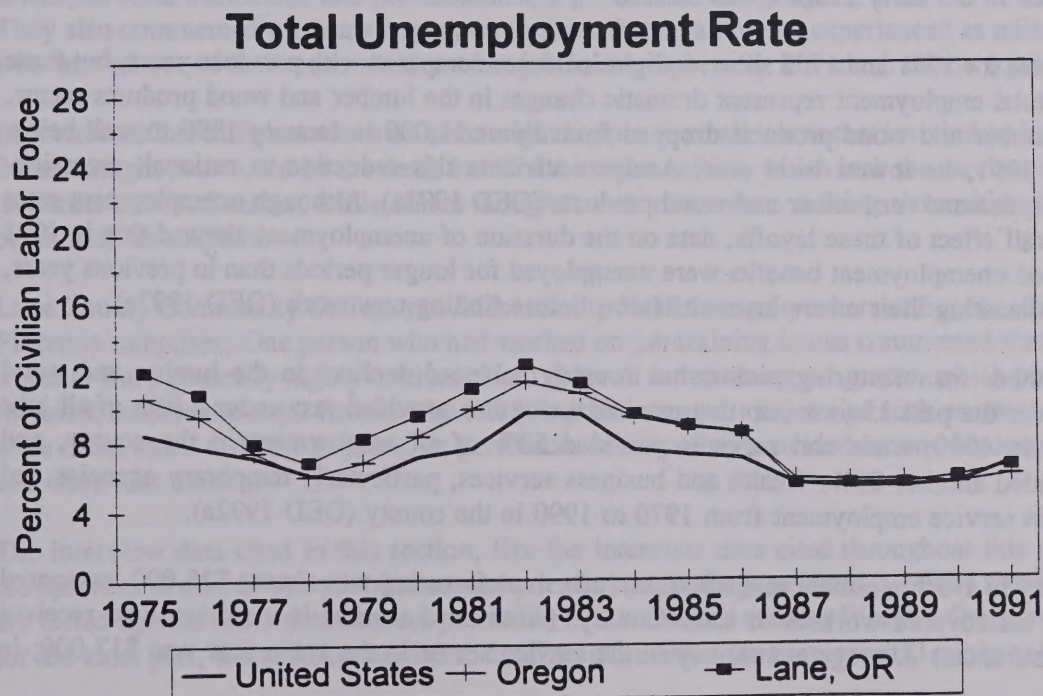
Table 21. -- Demographic data for Lane County (U.S. Bureau of Census). All percentages are percent of total population.

Demographic measure	1970	1980	1990
Total population	213,358	275,226	282,912
Urban population	69.7%	73.1%	74.6%
Population 65+	8.3%	9.6%	13.1%
Persons who moved into county since 1985			25%
Persons below poverty level	11.1%	12.8%	14.5%

Table 22. -- Income data for Lane County (U.S. Bureau of Economic Analysis). Percentages are percent of total personal income.

Income measure	1970	1980	1990
Total personal income (Millions of 1987 dollars)	\$2,131.3	\$3,511.7	\$3,896.8
Per capita income (1987 dollars)	\$9,848	\$12,759	\$13,689
Income from transfer payments	10.7%	14.5%	17.1%
Income from lumber and wood products sector	17.1%	12.7%	7.4%

Figure 2. -- Unemployment rates for Lane County (Bureau of Labor Statistics).



Note: County estimates are less reliable than state estimates due to estimation procedure.

Census data offer some support for these opinions, showing a large drop in people in their 20s from 1980 to 1990 that is only partially attributable to the general aging of the Lane County population. In contrast to this trend, net migration data suggest that people aged 65 and above have been moving into the county (OED 1992a). Despite these changes in the age structure of Lane County's population, in 1990 the county median age of 33.9 was still lower than the state median age of 34.5 (OED 1992a).

Although interviewees did not note the influx of retirees to be producing noticeable social changes to date in Lane County, if the trend continues, county officials anticipate that support for schools and youth services could be undermined if new migrants protest property taxes that are much higher than in other states. Anti-California attitudes could also increase local frictions due to immigration. (This is not a new situation; a 1979 social assessment of the Eugene District documented local dissatisfaction with immigration of Californians: Peterson 1979.)

Census data show a slow growth in minority populations, from less than 5% to 6.2% of the population from 1980 to 1990 (OED 1992a), but an increasing Hispanic population and consequent needs for bilingual services are reportedly not welcomed by some county residents, which could be another source of local friction and reduced support for government services.

Employment and income

Recent trends

From 1975 to 1985, unemployment in Lane County ran slightly higher than the state average; by 1987, however, annual unemployment rates were slightly less than those for the state, and they remained below 6% through 1990, the lowest jobless rates Lane County had seen since the late 1960s (Figure 2; OED 1992a). Seasonal fluctuations in employment also became more muted in the late 1980s and early 1990s, varying by 1-2 percentage points within a year, compared with differences well over 5 percentage points within a single year in the early 1980s (OED 1992a).

Unemployment rates for 1991 and 1992 showed slight increases compared with previous years, but these slight changes in total employment represent dramatic changes in the lumber and wood products sector. Employment in lumber and wood products dropped from about 11,000 in January 1990 to well below 9,000 in January 1991, its lowest level ever. Analysts attribute this reduction to national, recession-induced declines in demand for lumber and wood products (OED 1992a). Although unemployment rates show a small overall effect of these layoffs, data on the duration of unemployment showed that in 1991 people who claimed unemployment benefits were unemployed for longer periods than in previous years, and more were exhausting their unemployment claims before finding new work (OED 1992a).

Growth in non-timber manufacturing sectors has roughly balanced declines in the lumber and wood products sector over the past 15 years, so that manufacturing has provided just under a fifth of all jobs in Lane County. In 1990, trade and services provided 50% of all employment in the county, and government provided another 20%. Health and business services, particularly temporary agencies, led the 59% growth in service employment from 1970 to 1990 in the county (OED 1992a).

Average annual pay in 1990 in lumber and wood products manufacturing was almost \$25,000, compared with \$19,600 for all covered workers in Lane County. (A covered worker is a worker who receives unemployment insurance.) Average annual pay in the service sector in the same year was \$17,000; in

retail trade it was \$12,000 (OED 1992a). Real wages (i.e., adjusted for inflation) declined in most economic sectors in Lane County in the 1980s, but real wages in lumber and wood products fell at a faster rate than in most other sectors, which, along with job losses, accounts for the declining share of that sector in the county economy (Table 22; OED 1992a).

Total income from transfer payments in Lane County increased 840% from 1970 to 1990, while income from earnings increased by only 475% in the same two decades. Medical payments led the growth, increasing by 1900% from 1970 to 1990; pensions and medical payments accounted for 77% of all transfer payments in 1990 (OED 1992a). The growing share of transfer payments in the county economy is shown in Table 22.

Lane County's per capita income has remained below state and national averages in the past 20 years, though it was higher in 1990 than per capita incomes in counties in the Roseburg, Coos Bay, and Medford districts and the Klamath Falls Resource Area counties (OED 1992a). As in all other western Oregon counties, the proportion of the population living in poverty increased during the 1980s (Table 21).

Social effects

In interviews, people told different stories about urban and rural Lane County. Those who were most familiar with the Eugene/Springfield area cited its growing economic diversity as the main reason why job losses in the lumber and wood products sector would not have profound socioeconomic effects on the region in general. Those who were most familiar with small towns in the county saw much more serious consequences of the 1990 recession and the proposed BLM reductions in timber harvest. Timber dependency was not thought to be uniform among small towns; in some "timber has died," in the words of one interviewee, while others were still thought to be highly timber dependent.

Interviewees described the ripple effects of timber-related unemployment through the economies of small towns, as local businesses and professionals, e.g., doctors and lawyers, went out of business or moved. They also commented on drops in property values that small towns experienced as mills closed; workers who moved out of their communities after job losses reportedly lost much of the equity in their homes.

Interviewees had different views on what might happen to small towns that lost timber-based employment. Some thought that would be the death knell of the communities, which lack the services and infrastructure to attract new businesses, while others thought some towns were making a transition to other economic bases such as tourism.

Lane County Community College provides training for dislocated workers at Eugene, Cottage Grove, and Florence campuses. One person who had worked on job training issues commented that displaced timber workers were generally highly motivated and did well in retraining programs, which often prepared them for work outside the area. People who had lost jobs in support industries such as retail and clerical work were often more difficult to place, in part because they often provided second incomes in their families and were less mobile.

The interview data cited in this section, like the interview data cited throughout this chapter, represent the opinions of a small sample of community leaders in the Eugene District. While some of these opinions are tested against other data sources presented in this chapter and the Western Oregon Analysis chapter, for the most part, information needed to confirm or revise these opinions still needs to be collected at the

district level. Districts could collect and analyze much of this information themselves, through examining their own records and obtaining information from local governments, businesses, and service providers.

Business and industry

Wood products industries

From 1980 to 1989, 21 mills closed in Lane County; 10 of these were in Eugene or Springfield, and the rest were in smaller towns in the county. In 1990, 3 sawmills and 7 plywood and veneer mills closed in the communities of Cresswell, Culp Creek, Cottage Grove, Eugene, Goshen, Junction City, Mapleton, Oakridge, and Swisshome. From 1991 to May 1993, an additional sawmill closed in Springfield, and 6 plywood and veneer mills closed in Coburg, Cottage Grove, Cushman, Eugene, Springfield, and Vaughn (Ehinger 1993).

While mill closures in the early 1990s have been attributed largely to national economic trends, economic analysts think that reduced federal harvest levels will curtail recovery in the lumber and wood products sector (OED 1992a). One person noted, however, that mills in Eugene and Springfield are buying logs from more distant locations such as Washington, Idaho, and California, and that these mills are among the most technologically advanced and efficient in the nation. With secondary manufacturing of wood products, the development of new products, and ever-improving utilization of wood, the timber industry could remain strong in the area, according to this argument.

Economic diversity and development

Economic data and interviewees agreed that the economy of Lane County has become more diversified in the past decade or so, both in manufacturing and nonmanufacturing sectors. Expanding manufacturing industries include electrical and transportation equipment, printing and publishing, and food processing (OED 1992a). The University of Oregon in Eugene is one of the largest employers in the county. The public sector is usually one of the most stable sectors of the economy, but under Ballot Measure 5 budget cuts, the University cut 225 faculty and staff positions, raised tuition by 38%, and cut enrollment from 1991 to August 1993 (OED 1992a; Pittman 1993).

Agriculture is also important to the economy of Lane County: gross farm sales were valued at over \$113 million in 1990. Primary agricultural products include grass seed, poultry and eggs, field crops, specialty products such as Christmas trees, cattle, and vegetable crops (OED 1992a). Commercial fishing and seafood processing form a small share of the county economy, but are important to coastal communities; the value of the commercial seafood catch at Florence was over \$1 million in 1990 (OED 1992a).

Eugene and Springfield lead the county in economic diversification, and interviewees reported that the cities are setting up zoning and industrial land use policies designed to attract new businesses and foster small home-based businesses. Economic development strategies in Mapleton and Oakridge include attracting light and cottage industries and new businesses, promoting tourism and recreation, and improving the appearance of the communities. Oakridge is also targeting provision of health services for retirees, while Mapleton is seeking to improve highway and river transportation in the area (MCRT 1991, OCRT 1991). The City of Harrisburg in southern Linn County has targeted the renovation of its

downtown and riverfront area as an historic district, to attract both tourism and new businesses (HCRT 1991).

County revenues, infrastructure, and services

In 1991, federal forest revenues represented 28% of Lane County's expenditures (Table 7). In 1990, the value was 36% (Lee et al. 1991). Roughly a third of federal forest revenues have come from the BLM in recent years, and these were estimated to provide 29% of the law enforcement budget and 12% of the assessor's budget in 1990-1991 (Lee et al. 1991).

County service providers predicted in 1990-1991 that reductions in county revenues would lead to some rationing of medical care as staff and resources were lost. Preventative care and counseling and education programs (e.g., drug, alcohol, and sex education) would be cut back or eliminated and replaced by emergency care. Law enforcement officials predicted increases in property crimes and drug- and alcohol-related crimes as a consequence of increasing unemployment. The Private Industry Council, which was coordinating retraining and educational programs for dislocated workers, estimated that they were meeting the needs of only half the eligible unemployed and predicted an increase in homelessness among older, single men who had lost their jobs (Lee et al. 1991).

In interviews in the summer of 1993, people thought that reduced revenues to Lane County would have significant socioeconomic effects. Some thought that they would be more keenly felt than job losses in the timber industry among county residents in general. A County Commissioner commented that 3 or 4 county health clinics may be cut back, even as need for public health services increases. Law enforcement, which uses half of the county's general fund, would be most affected by reductions in O&C payments. Measure 5 cutbacks at the University of Oregon and in local school districts were thought to be seriously compromising education in the county. In interviews, people emphasized that Measure 5 reductions in government services and infrastructure could prove harmful to economic development efforts, since poor schools and services would not attract new businesses. One person described how the loss of local taxes from a mill closure can increase the tax burden on people left in the community, even as their income and property values fall, although Measure 5 also limits local governments' abilities to increase taxes.

Stakeholders

The following discussion of Eugene District stakeholders is drawn from the focus group with District employees in August 1993, which produced the information in Table 23, and from public comment letters sent to the District Office about the Draft RMP by December 1992. This analysis provides "best guesses" about the people who are most directly affected by BLM land management in the Eugene District. It can be used as a starting point for more in-depth analyses, which were beyond the scope of this study, but it should not, in itself, be considered entirely conclusive. The focus group also revealed rapid recent changes in resource use on BLM lands, e.g., in special forest products collection and new forms of recreation, that could alter the stakeholder groups over the next several years.

Local stakeholders

Local recreation stakeholders. -- Local residents are thought to be the primary users of developed recreation sites and target shooting areas in the Eugene District at present, but new developed recreation sites have been proposed that are expected to attract people from a larger geographical area. Focus group participants thought that most recreational uses of District BLM lands draw people from outside the District as well as local residents. Public comment letters indicate a demand for designated areas for off-highway-vehicle recreation within the District, though this use was not favored in the Hecata Sand Dunes Area by some coastal residents.

Local forest product stakeholders. -- Most people who harvest forest products from Eugene District BLM lands are based in the District or just outside it, according to participants in the focus group. Local mills and mills in Linn and Douglas counties are the main purchasers of timber, and local collectors harvest a wide variety of non-timber forest products for personal and commercial use (Table 23). Non-timber forest products were thought to provide supplemental income to collectors and full-time employment to wholesalers in the District. Animal control for the State and U.S. Fish and Wildlife Service and trapping also provide supplemental income for a few local residents.

Other local stakeholders. -- Eugene District BLM lands currently provide water to rural interface residents, agricultural users, and municipalities in the District. A public comment letter from the City of Florence noted that some BLM lands are also a potential future source of well water for the city, as local population and demand increase.

Adjacent landowners in the Eugene District expressed concern about possible timber management activities in West Fox Hollow and Peaceful valleys, a proposed Wild and Scenic designation on the McKenzie River, and the development of a recreational mining area at Sharp's Creek in public comment letters. All of these letters cited potential environmental degradation of the areas as a main concern. On Sharp's Creek and the McKenzie River, recreationists were expected to be the main source of environmental impact.

Mining and quarrying on BLM lands support a few local individuals. Public comment letters indicated that small-scale miners in the district expect to be adversely affected under the new RMP by the withdrawal of some lands from mining, under new occupancy rules, and with the development of a recreational mining site in an area of existing claims, among other changes.

Illegal uses of BLM District lands, some of which are attributed to local residents, include poaching, indiscriminate shooting, vandalism, dumping, and marijuana growing.

Regional stakeholders

Regional recreation stakeholders. -- Hunting, fishing, and rafting draw people from outside the District, supporting local guides, restaurants, hotels, and stores. Focus group participants noted that organized ecotourism is starting in the area, mostly focused on old growth, but most nature study and other forms of outdoor recreation that local and regional visitors enjoy on BLM lands do not bring much into local economies at this point in time. Proposed developments of a rails-to-trails project and recreational mining area are expected to attract more regional visitors who would contribute to businesses in adjacent towns.

Regional forest product stakeholders. -- Beargrass was the only forest product that the focus group identified as collected by people based outside of the District. As in other districts, beargrass collectors were thought to be Southeast Asian residents from out-of-state, particularly Washington cities.

Other regional stakeholders. -- Commercial fishermen in the region are affected by BLM forest management, although they are not direct users of BLM lands. Communication sites and rights of way for powerlines, railroads, and public roads also affect people at the local and regional levels, at the least.

National and international stakeholders

Domestic and international markets for forest products harvested from District lands were mentioned in the focus group, but no specific examples of extra-regional stakeholder groups were provided by the focus group or public comment letters.

Table 23. -- Human uses of Eugene District BLM lands: results of August 1993 focus group. These preliminary data are "best guesses" of focus group participants. Question marks and empty cells indicate areas for further study.

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Christmas trees	Locals, local markets	193 sales in 1992			More regulation and control, more cooperative relationships in management, more monitoring, research and management for some special forest products (not in RMP)
Cascara bark	Local collectors for pharmaceutical trade	5 sales in 1992			"
Wild plants	Local collectors	14 sales in 1992			"
Firewood	Local individual and commercial collectors	252 sales in 1992		Significant heating source for rural locals	Increased restrictions on heating use will decrease demand in Eugene/ Springfield (not BLM)
Cedar bolts and shakes	Local cutters and mills; sent out-of-state	2 sales in 1992			More regulation and control, more cooperative relationships in management, more monitoring, research and management for some special forest products (not in RMP)
Poles	Local cutters for market, individuals for own use	4 sales in 1992			"
Saw timber	Local	23 sales in 1992			"
Maple burls	Illegal collecting				"

Table 23 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Yew wood	Trying to develop for local artisans (Cottage Grove)				"
Mushrooms	Mostly locals collecting for local sheds, exporting to domestic and foreign markets	1,000 lb recorded in 1991	?	Mostly supplemental income for collectors, full-time employment for sheds	"; density management may decrease mushroom numbers
Beargrass	Cambodian, Laotian, Hmong, and Thai collectors from out-of-state	5,000 lb recorded in 1991	Demand is increasing	"	"; beargrass may decrease with density management
Moss	Local collectors for local sheds	27 sales in 1992	10-30 yr for commercial collections	"	"
Boughs	Mostly locals	17 sales in 1992	"	"	"
Huckleberry brush	Local collectors	3 sales in 1992	"	"	"; brush species may increase with density management
Ferns	"	8 sales in 1992	"	"	"
Greens	"	27 sales in 1992	"	"	"
Yew bark	" and contractor in Sweet Home	19 sales in 1992	Recent	"	

Table 23 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Target shooting	Mostly locals, some out-of-area; muzzle-loader club	Year-round, including monthly and annual events	10 yr ?	Local services; permit and license fees	Develop some areas for shooting and close others in consultation with communities
Indiscriminate shooting	Primarily locals	Year-round; increasing use	As long as guns have been in the area		Road closures will reduce use; work with communities to direct shooting to specific areas (will require change in community values and actions; self-policing); expect less damage to signs and littering when use declines
Poaching	"	"	Had been decreasing in past 15-20 yr, but increasing recently	Food	"; expect job losses will lead to increased poaching; more poaching also results in ODF&W issuing fewer permits for legal hunting

Table 23 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Timber harvest	Most BLM logs are processed in-district or just outside of district: Gardiner, Roseburg, Lebanon for local to international markets; BLM logs replace private logs that are shipped overseas	Year-round, with a few exceptions; BLM harvests are part of a seasonal schedule for mills and loggers	Late 30s/early 40s	Wages have been declining since the 70s: most mills left are nonunion	70% decrease from historic levels, but an increase in harvest from the past couple of years; more labor-intensive systems for thinning and logging; change in timber-producing community values to multiple use values, e.g., in Cottage Grove and Oakridge
Hunting	Locals and people from out-of-area, but mostly within state; guide services for mountain lions and bears	Hunting seasons: 3-4 months/yr	Elk hunting has increased with herd recovery; turkey hunting is increasing; other hunting about steady; guide services are new in past 10 yr	Supplemental income for guides; some food for hunters, but mostly recreation; motels and supplies	No change for most species; elk numbers will improve; road closures will affect access
Trapping	Mostly locals: mink, raccoon, coyote, bobcat	Year-round	Forever	Supplemental income	?
Animal control	Local State and USFWS permittees		50+ yr	Primarily supplemental income??	Will continue to be phased out

Table 23 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Bird, wildlife, fish, and plant watching/study	Some locals, some out-of-district and out-of-state	Year-round; more in spring and summer	Increased rapidly in past 20-30 yr	Wild bird store, services; ecotours are beginning in the area, mostly oriented towards old growth	Watchable wildlife program will increase; west Eugene wetlands program has high potential for wildlife viewing; Coburg Hills bald eagle roost (30-50+ eagles in winter) will be promoted as watchable wildlife area
Placement of rehabilitated animals					Some species, e.g., beaver, may be reintroduced? Would be cooperative work with State and USFWS
Domestic water supply	Direct use by rural interface residents, especially in the Coast range: 15-20 permits, plus unauthorized use; thousands of downstream users			Sole source of water for some people	Restoration projects and reductions in road building and harvest will improve water quality and help to regulate flows; may change inventory and permits for domestic water use
Agricultural water supply	" and headwaters for Willamette Valley				"

Table 23 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Municipal water supply	Eugene/Springfield area and some small municipalities		Some reservoirs built in early 50s-60s (mostly for flood control)		"; cooperative purchase and management of 3500 acre wetland in west Eugene will improve flood storage capacity and improve the quality of wastewater runoff
Mining claims	Mostly locals; no current home sites on claims	Sporadic seasonal use; about 75 claims	Mining on BLM land since 40s, since 1880s on adjacent FS land; increase in claim location in early 1980s	Small amounts of gold	New Congressional regulations will require claim-holders to pay a rental fee or file for an exemption; expect this will cause people to drop claims and also blame the BLM for these changes; land withdrawals will prevent future claim locations and prompt validity exams
Mineral leases	None now; oil and gas companies in past		Mid 50s, late 70s	Rent to BLM; companies bring in out-of-area crews, so no direct local employment	Would be subject to special leasing steps that restrict surface disturbance
Quarries	Local residents, timber companies, BLM road contractors, and crushing contractors	Short-term	Early 1900s, expanded with growing road network	Users save transportation costs for hauling gravel from longer distances; family income for crushers	Close quarries or restrict their development for wildlife and visual reasons; less roadbuilding will reduce demand

Table 23 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Rails-to-trails (proposed from Cottage Grove to Culp Creek, eventually to Oakridge)	I-5 corridor and Eugene/Springfield users: bike, pedestrian, and horse users; organized events, e.g., regional bike race. Ties into major FS trails, Back-country Byways, watchable wildlife areas, and recreational mining areas. Cooperative partnership with City of Cottage Grove, county and state parks, Army Corps, FS, and other users, e.g., recreational clubs		Future	Bike and horse rental, adjacent stores and cities, new hotels in Cottage Grove	Would be developed under RMP
Fishing	Commercial and sport salmon fishermen from western OR and Willamette Valley; fishing guides; McKenzie and Siuslaw r. are international Blue Ribbon trout streams	Year-round	Sport and commercial fishing since 1800s	Coastal towns, guides and services, supplies, charter boats	Production improved; water quality in estuaries improved; Wild and Scenic designations on McKenzie and Siuslaw would maintain habitat
Rafting	McKenzie Resource area: guides, local and out-of-area rafters	Summer day use	Last 10-15 yr	Income for guides	May limit use or develop a permit system
Developed recreation areas (5 proposed, and existing)	Existing sites draw from local area; anticipate drawing from larger area for new sites	Weekend and longer	1960s	Businesses nearby profit, e.g., Triangle Lake store	Create more areas

Table 23 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Recreational mineral collection	Gold panning: western OR	Summer day and weekend use	Last couple of years	Nominal expenditures on supplies and services	Sharps Creek facility would increase use and access, link to rails-to-trails development
Research					
Homeless					
Rights of way	Driveways, pipelines, powerlines, cables, phone lines, public roads, railroads				
Communication sites					
County park leases					
Hang gliding					
Paragliding					
Swimming/sun bathing/picnics					
Grazing					
Trails					
Sightseeing					
OHV					

Table 23 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Bicycling	Mountains bike and organized road bike tour				
Horse riding					
Photography					
Marijuana plots					
Dumping					
Vandalism					

KLAMATH FALLS RESOURCE AREA ANALYSIS

The Klamath Falls Resource Area, on the east slope of the Cascades in southern Oregon, is part of the Lakeview BLM District. The Resource Area differs in its biotic communities and some resource management issues from the other Oregon districts that are described in this report. It does, however, contain O&C timberlands, and is part of the BLM's coordinated planning effort for its O&C and western Oregon lands. The Resource Area is in the southern part of Klamath County, near the Oregon-California border. Population and economic data are presented for Klamath County in this chapter; chapter sections appear below.

Population

Employment and income

- Recent trends

- Social effects

Business and industry

- Wood products industries

- Economic diversity and development

County revenues, infrastructure, and services

Stakeholders

Local stakeholders

- Local recreation stakeholders

- Local forest product stakeholders

- Local Native American stakeholders

- Other local stakeholders

Regional stakeholders

- Regional recreation stakeholders

- Regional forest product stakeholders

National and international stakeholders

- National and international recreation stakeholders

- Other national and international stakeholders

Population

Klamath County declined in population from 1980 to 1990 as a result of recessionary effects on local lumber and wood products, construction, and transportation industries; the 1981 closing of Kingsley Air Force Base; and a depressed agricultural sector (Table 24, OED 1992a). Unincorporated areas bore most of the loss; with the exception of Chiloquin, all towns increased in population between 1980 and 1990.

In interviews, community leaders noted an influx of retirees in recent years that has mitigated population losses; migration data for 1980 to 1990 show a net outmigration of 5,187 people under the age of 65, and a net immigration of 60 people over the age of 65 (OED 1992a). The age distribution in the county differs little from that of the state, with a median age of 34.9 years in Klamath County, compared with 34.5 for Oregon (OED 1992a). Although many left the county during the 1980s, interviewees reported that some who lost jobs stayed on. Many unemployed wood products workers who "stayed" were reported to have sought employment outside the county, leaving spouses and children at home while they spent much of their time on the road.

Table 24. -- Demographic data for Klamath County (U.S. Bureau of Census). All percentages are percent of total population.

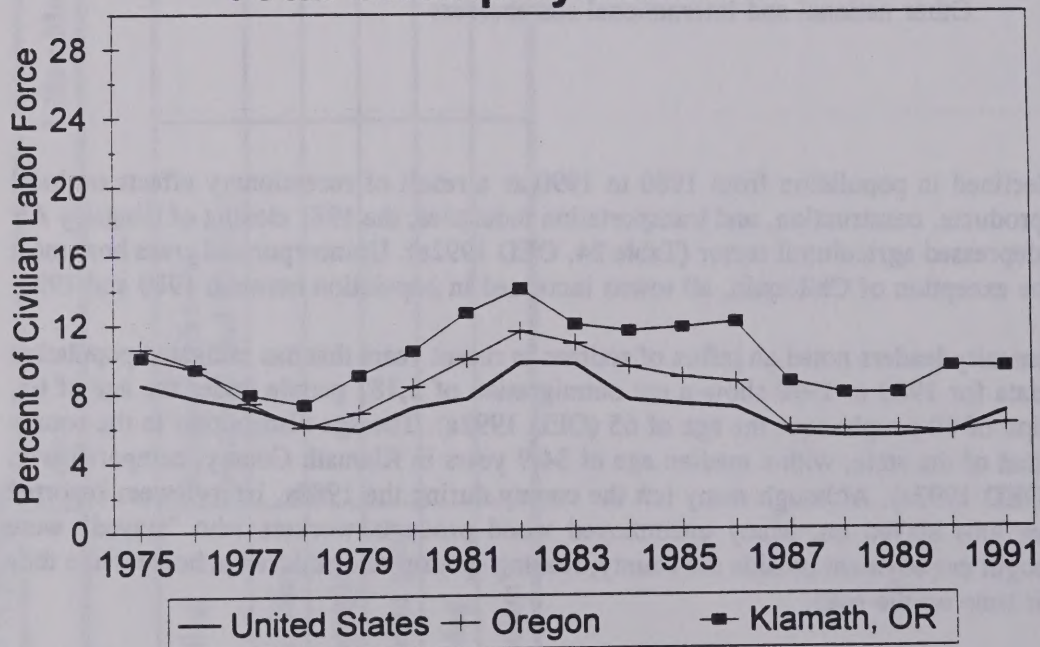
Demographic measure	1970	1980	1990
Total population	50,021	59,117	57,702
Urban population	63.0%	61.7%	63.0%
Population 65+	8.4%	10.6%	14.4%
Persons who moved into county since 1985			24%
Persons below poverty level	12.4%	12.6%	16.7%

Table 25. -- Income data for Klamath County (U.S. Bureau of Economic Analysis). Percentages are percent of total personal income.

Income measure	1970	1980	1990
Total personal income (Millions of 1987 dollars)	\$527.6	\$741.9	\$721.9
Per capita income (1987 dollars)	\$10,486	\$12,531	\$12,466
Income from transfer payments		16.0%	20.5%
Income from lumber and wood products sector	17.7%	19.1%	13.5%

Figure 3. -- Unemployment rates for Klamath County (Bureau of Labor Statistics).

Total Unemployment Rate



Note: County estimates are less reliable than state estimates due to estimation procedure.

Employment and income

Recent trends

From 1975 to 1977, unemployment rates in Klamath County varied little from statewide rates; since 1978, however, unemployment rates have been consistently higher than the state average (Figure 3). Unemployment has remained high in the early 1990s, at 10.2% in 1990, 9.3% in 1991, and 10.7% in 1992 (OED 1992a; Mahan 1993).

From 1980 to 1990, 890 jobs were lost in the lumber and wood products sector, a reduction of 20%. Another 460 jobs were lost in the transportation, communications, and utilities sector, a reduction of 30% in employment in that sector. Employment rates document only civilian employment, and thus do not show the loss of several hundred military jobs from the local economy when Kingsley Air Force Base closed in 1980-1981 (OED 1992a).

Employment growth in Klamath County during the 1980s was led by the addition of 840 jobs in the service sector, a growth rate of 27%. The fastest growth occurred in manufacturing other than lumber and wood products: an addition of 430 jobs for a 75% increase. Government and trade sectors were also sources of employment growth in 1980-1990. Growth in government was led by growth of the Oregon Institute of Technology and the assignment of an Air National Guard training mission to Kingsley Field (OED 1992a).

Although average annual wages in the growing service sector are much lower than wages in manufacturing (\$14,526 per year compared with \$23,542 per year in 1989), economists note that growth in the service sector is providing opportunities for women and youth who historically had few employment options in an economy dominated by lumber and wood products (OED 1992a).

Transfer payments were the fastest growing component of total personal income in Klamath County in the 1980s, outstripping earnings in all economic sectors and income from dividends, interest, and rent. Most of this growth came from medical and pension payments to retirees; welfare and unemployment payments constituted only about 8% of all transfer payments (OED 1992a).

The economic hardships that Klamath County experienced in the 1980s are reflected in changes in poverty and per capita income from 1980 to 1990. In 1980, Klamath County ranked 19th among the 36 Oregon counties in per capita income; in 1990, it ranked 33rd. Its 1990 poverty rate of 16.7% was second only to Josephine County's 18.3% among the 19 counties in the study area (OED 1992a; Table 24).

Social effects

In interviews, people spoke at length about the hardships experienced in the 1980s and early 1990s, the ripple effects of job losses in lumber and wood products and at Kingsley Field through local communities, and local economic development efforts. Interviewees mentioned family hardships as men who had worked in the timber industry "hit the road" looking for work, leaving their families at home and their wives looking for "nonexistent" work in the local area. Combined with the closing of Kingsley Field Air Force Base, people reportedly saw few alternatives in the area and many left. Social service and law enforcement demands were thought to have increased among those who stayed, e.g., for drug and alcohol-related problems and domestic violence, to the point that area counselors, police, and pastors felt overwhelmed.

The county's agricultural sector suffered during the 1980s due to poor crop prices and rising costs (OED 1992a). Interviewees reported an increase in farm foreclosures and bankruptcies in the 1980s, which they attributed, at least in part, to federal agricultural programs that encouraged overproduction of crops. A drought in 1992 reportedly forced more local farmers out of business, and others to sell land or otherwise scale back their operations.

In interviews, people expressed hope that the worst of the area's job losses and economic troubles were behind them, and thought that community spirit had improved in the past few years as retirees and some new industries and businesses had moved into the area.

The interview data cited in this section, like the interview data cited throughout this chapter, represent the opinions of a small sample of community leaders in the Klamath Falls Resource Area. While some of these opinions are tested against other data sources presented in this chapter and the Western Oregon Analysis chapter, for the most part, information needed to confirm or revise these opinions still needs to be collected at the district level. Districts could collect and analyze much of this information themselves, through examining their own records, and obtaining information from local governments, businesses, and service providers.

Business and industry

Wood products industries

From 1980 to 1989, 3 sawmills and 2 veneer mills closed in Klamath Falls, Malin, and Bly. Chiloquin lost two sawmills in 1990 and 1991, and in 1992, a Weyerhaeuser sawmill with employment of 700 closed in Klamath Falls (Ehinger 1993). Although income from lumber and wood products as a proportion of total personal income dropped notably during the 1980s, in 1990 Klamath County was second only to Douglas County among the counties in the study area for this measure of timber dependency (Table 25). A public comment letter from a member of the Klamath County Local Resource Task Force stated that their preliminary research on the county's timber industry indicated that employment per million board feet exceeded the state average of 18.42 jobs, because of the presence of several secondary manufacturers of wood products in the county. Despite the importance of the lumber and wood products industry to the local economy, interviewees spoke little about effects of the RMP on this economic sector, offering the opinion that areas to the west would be much harder hit. Instead, they spoke about the effects of the RMP on local economic development and diversification.

Economic diversity and development

An analysis of earnings by economic sector in 1989 showed manufacturing to account for 28% of total earnings in Klamath County. Government, services, and trade each contributed about 18-20% of total earnings. Transportation, communications, and utilities together provided 8% of earnings (OED 1992a).

Farm income provided another 5% of earnings in 1989, and in 1990, Klamath County gross farm sales were valued at \$120.7 million. Sales of cattle and calves were worth \$45 million, while field crops such as potatoes brought in another \$31 million. Grains, hay, and silage added \$24 million to total farm receipts in the county (OED 1992a).

Local economic development efforts have targeted diverse sources of income and employment, from light industry, which increased during the 1980s as some small, high-tech firms moved in, to tourism and retirement services, to developing Kingsley Field as a major international trade center (OED 1992a).

Community leaders have developed proposals for two projects to revitalize the local economy that have been affected by federal resource management agencies. One project, a proposed ski/winter recreation development, has been blocked by the U.S. Forest Service, according to city and county officials. The proposed Salt Caves Hydroelectric Project on the Upper Klamath River would be blocked under the BLM RMP Preferred Alternative by the designation of that portion of the river as scenic under the National Wild and Scenic Rivers Act (USDIBLM Klamath Falls Resource Area Office 1992).

The Salt Caves Project was developed by the City of Klamath Falls to contribute to the local economy in two ways: 1) by direct provision of jobs, 2) by providing revenue to establish a private, non-profit economic development corporation. The City estimates that the Salt Caves Project would generate over \$2 million annually, that, when invested in local industries and businesses, would create up to 500 new jobs each year (James Keller, City of Klamath Falls, personal communication). In addition, Salt Caves advocates argue that the project would provide inexpensive power at minimal environmental cost, especially as one considers the environmental costs of other potential sources of power such as fossil fuels. Advocates have also claimed substantial environmental benefits to the "no-dam" project alternative, e.g., to fisheries. Environmental benefits to fish have, however, been disputed by the Oregon Department of Fish and Wildlife.

City and County officials expressed great frustration with federal land management agencies, that, in their view, were paying inadequate attention to the needs of distressed local communities. In July and August 1992, the Klamath County Board of Commissioners passed one resolution (Klamath County Interim Land Management Plan) and two ordinances that outlined rights of the County and private citizens that were threatened by federal agencies. Public comment letters sent to the Resource Area by the City and the County repeat requests to meet with the BLM to coordinate local and federal planning efforts.

The proposed designation of the Upper Klamath River as Wild and Scenic in the Draft RMP is but one part of lengthy discussions and debates over the Salt Caves Project and the Upper Klamath River among local community leaders, the federal government, and environmentalists. The Klamath Falls Resource Area Draft RMP provides additional information on the project, the Wild and Scenic designation, and the environmental/socioeconomic costs and benefits associated with both (USDIBLM Klamath Falls Resource Area 1992). The stakeholder section in this chapter describes recreational users and others who support the Wild and Scenic designation.

County revenues, infrastructure, and services

While federal forest receipts were equivalent to over half of Klamath County expenditures in 1990 and 1991, Forest Service receipts were over 5 times the amount of BLM receipts (Table 7, Lee et al. 1991). O&C receipts were, however, estimated to provide one third of the county law enforcement budget in 1990-1991 (Lee et al. 1991).

In 1990-1991, Klamath County health service providers predicted that declining revenues would force preventative programs and drug, alcohol, and sex education and counseling to be curtailed or ended. Emergency care programs would be maintained. Providers expected increased mental illness symptoms

with unemployment and a "rush" on public health services by people unable to obtain care in the private sector. Law enforcement officials reported that the department had not fully recovered from cutbacks in the early 1980s, and reduced revenues would result in the loss of patrol officers, causing increased reliance on the State Patrol during emergencies and delayed responses to property crimes. Increases in domestic violence, substance abuse, and suicide attempts were anticipated; an increase in murders associated with domestic violence had already been noted (Lee et al. 1991).

Interviews in 1993 confirmed cutbacks in law enforcement. A Klamath County Commissioner reported that in the previous year, 55 positions had been reduced in the County Sheriff's Office and the County jail's budget had also been cut so that it could serve fewer inmates. Most other County departments were being cut back as well, including libraries. Tax revenues to both Klamath County and the City of Klamath Falls were reported to have fallen with high unemployment and outmigration during the 1980s. In 1988, the City of Klamath Falls laid off employees, turned off street lights, and sharply reduced basic services such as road maintenance due to lack of funds. In 1989, city residents passed a special tax levy to avoid layoffs of police and fire department personnel. Ballot Measure 5, as well as local economic hardship and a diminishing tax base, limit local governments' ability to generate revenues to replace lost federal timber receipts, according to City and County officials. In response to Measure 5, the City and County have already been streamlining their operations and consolidating services and departments, e.g., City and County parks and recreation. One interviewee emphasized that the area had a solid infrastructure that could serve local economic development and population growth, if revenues were available to properly maintain it.

Stakeholders

The following discussion of Klamath Falls Resource Area stakeholders is drawn from the focus group with Resource Area employees in July 1993, which produced the information in Table 26, and from public comment letters sent to the Resource Area Office about the Draft RMP by December 1992. This analysis provides "best guesses" about the people who are most directly affected by BLM land management in the Klamath Falls Resource Area. It can be used as a starting point for more in-depth analyses, which were beyond the scope of this study, but it should not, in itself, be considered entirely conclusive. The focus group also revealed rapid recent changes in resource use on BLM lands, e.g., in special forest products collection and new forms of recreation, that could alter the stakeholder groups over the next several years.

Local stakeholders

Local recreation stakeholders. -- Local residents were thought to be the main users of Klamath Falls BLM waters for boating, water skiing, canoeing, and warmwater fishing. On BLM lands in the Resource Area, locals ride horses and OHVs, camp, mountain bike, hike, sightsee and star gaze, collect rocks, hunt, trap, shoot, snowmobile, and ski. With the exception of camping, these activities are mostly day-use. Local anglers join regional and national visitors in cold-water fishing in the Resource Area. Public comment letters indicated differing local interests in Swan Lake Rim: some people would like to see some trails in the area open for motorized vehicle use, while others would prefer that these vehicles be entirely excluded from the area.

Local forest product stakeholders. -- Local residents harvest posts and poles, wild plants, mushrooms, and firewood from BLM lands for their personal use, and some locals collect mushrooms to sell commercially. Local mills, loggers, and equipment operators benefit from timber harvests and silvicultural treatments in the Resource Area, and new juniper removal projects are anticipated to provide local employment.

Local Native American stakeholders. -- Two Indian tribes have interests in forest lands and waters in or adjacent to the Klamath Falls Resource Area. The Karuk Tribe of California expressed its concerns about declining fish populations and water quality in the Klamath River in a December 1992 letter to the Resource Area, noting, "Our people rely on the clean and productive waters of the Klamath River for subsistence and ceremonial purposes, as well as recreation and enjoyment."

The Klamath Tribe signed a treaty in 1864 that established a reservation with certain rights including hunting, trapping, and fishing on the reservation. The Klamath Termination Act of 1954 formally terminated the reservation and these rights, but a 1981 Consent Decree reinstituted their treaty rights on former reservation lands that were still in public ownership (in Winema National Forest). They were formally restored to Federal recognition status in 1986, and are now trying to reestablish their former reservation, to a large degree (Richard Hanes, BLM Oregon State Office, personal communication).

The focus group noted that Native Americans use BLM lands in the Resource Area for religious sites and for collecting forest products. The FEMAT team noted that the Karuk tribe was concerned about its future ability to harvest Port Orford Cedar in Klamath National Forest old-growth areas under the FEMAT plans. Port Orford Cedar is used in rite of passage ceremonies (FEMAT 1993).

Although some of these concerns apply more directly to the Forest Service than to the BLM, the BLM's management of its forest and water resources clearly affects local Native Americans.

Other local stakeholders. -- The economic development and diversity section, above, details the City of Klamath Falls' interests in the Upper Klamath River for hydroelectric development and Klamath Basin agriculturalists' interests in the river for water storage projects, both of which could be worth millions of dollars, according to their advocates. Local irrigators already depend on the Klamath River for water, and irrigation canals and storage projects use BLM lands.

Adjacent landowners use BLM lands for grazing, and some grazing units are subject to shorter seasons of use under the RMP Preferred Alternative. According to some public comment letters from ranchers, shorter seasons could reduce the productivity of their cattle and disrupt the schedules of other ranch operations, e.g., by moving range closure dates to the middle of haying season.

One local individual uses BLM lands for mining, while gravel from BLM lands supplies the state and county governments and some local companies and individuals as well as the BLM. Local individuals also collect decorative rock for personal use. BLM lands in the Resource Area have had legal dump sites in the past, and a county transfer station opened last year on a former dump site to serve people living in Bly.

Illegal uses of BLM lands by locals include pot hunting at archaeological sites (also done by regional visitors), poaching, vandalism, and dumping.

Regional stakeholders

Regional recreation stakeholders. -- Regional visitors use BLM lands in the Resource Area for sightseeing, hang gliding, and some hunting, mostly for waterfowl. While hunting provides some income for local guides, other uses do not bring much into the local economy. Regional users also join national users in cold-water fishing and rafting, described below.

Regional forest product stakeholders. -- Commercial collectors from the Portland area visit the Klamath Falls Resource Area to collect boughs and juniper berries, and the numbers of non-local mushroom collectors have been increasing rapidly in the past 3-4 years. Regional mills also benefit from timber harvests in the Resource Area.

National and international stakeholders

National and international recreation stakeholders. -- The focus group thought that most whitewater rafting in the Klamath Falls Resource Area was done by people from outside the Area, on their own or with nonlocal commercial guides. They reported that one local part-time guide and some full-time guides from Medford and Ashland ran trips in the area, but most guides came from greater distances, bringing groups with them. Public comment supporting the Wild and Scenic designation of the Upper Klamath River and opposing the City of Klamath Falls' proposed Salt Caves Hydroelectric Project came from 18 states across the country and from Canada, a striking difference from the response patterns in the western Oregon districts, which received few out-of-state letters. Letters opposing the Salt Caves project also came from Klamath Falls and Klamath County. Letters in favor of the project and opposing the Wild and Scenic Designation came only from the local area. Those opposing the project and favoring the Wild and Scenic designation commented on aesthetic and existence values of the river, in addition to its recreational values.

Other recreation activities that draw national or international visitors to the Klamath Falls Resource Area include hiking on the Pacific Crest Trail, bird watching, and cold-water fishing. Anglers employ local guides and provide business to local hotels, restaurants, and stores.

Other national and international stakeholders. -- In addition to the City of Klamath Falls' Salt Caves Hydroelectric Project, the focus group reported that some out-of-state companies were also proposing hydroelectric developments in the Resource Area. Some companies have also expressed interest in geothermal development on BLM lands. Existing Northwest utilities use BLM lands in the Resource Area for pipeline and powerline corridors. These utilities, and the proposed projects, provide power to customers throughout the Northwest.

A small number of public comment letters came from people around the country who praised the health benefits of an algae that grows in the Upper Klamath River and is harvested and marketed by a local company; they also expressed concern about the Salt Caves Project.

Table 26. -- Human uses of Klamath Falls Resource Area BLM lands: results of July 1993 focus group. These preliminary data are "best guesses" of focus group participants. Question marks and empty cells indicate areas for further study.

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Boughs	Commercial collectors from Portland area	Late summer/fall	Since 1960s	Supplemental income, high value?	None
Juniper berries	"	A few weeks	"	"	None
Posts and poles	Locals for personal use	Summer/fall	Since settlement	Saves purchase costs	None
Mushrooms	Local commercial and personal collectors; seeing large increase in out-of-area collectors	Spring/fall	Locals: long time; commercial: last 3-4 yr	High value, livelihood for migrants	Some regulation? Fewer disturbed places will mean less supply
Wild plants	Locals for personal use	3 season	Long time	Incidental	None
Firewood	Locals, mostly for personal use	Spring/fall	Since settlement	Sole source of heat for some, equivalent to \$300-400/winter	None
Native American uses	Klamath, Modoc, Paiute, and Shasta tribes: collecting and religious sites	In season	10,000 BC	Intangible	More protection?
Grazing	Adjacent landowners, some resident, others not	Spring and summer	1870s	Part of livelihood	Decrease by about 5% (?); more intensive, shorter duration; more monitoring by operators and BLM
Boating, water skiing, and canoeing	Fishermen and sightseers, mostly local	3 season, mostly day use	Reservoir built in 1924; canoe use increasing	Boat dealers and supplies	New Wood River acquisition will increase canoeing opportunities

Table 26 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Whitewater rafting	Mostly nonlocals: world-wide; commercial guides are also from out-of-area	Day use or overnight trips	About 1980 (with development of self-bailing raft)	1 local part-time guide; others from out of town, e.g., full-time guides from Medford/Ashland	Wild and Scenic designation may increase popularity; would disappear with Salt Caves hydro development
Warmwater fishing	Locals	Day and weekend	Since settlement	Supplies and bait	Improve fish habitat
Coldwater fishing	Locals and outsiders (worldwide); guides; lodges	Year-round, but little in winter	10,000 BC; since 1950s? for tourists	Guides: some full-time, mostly supplemental income; hotels	"
Gravel	State and county governments, some local individuals and companies, BLM roads	Regular, periodic use	Since settlement	County gets lots of free gravel	None
Mining claims	One local individual, not a living site	Minor work	1872	Very little	None
Geothermal potential	No current users on BLM land; interest by companies	None yet	Since settlement/1920s in the area		Would be facilitated by the RMP, which provides for an exploratory well

Table 26 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Proposed hydro developments	Salt Caves project by City of Klamath Falls would provide some local power; Lorella pump storage and other projects by out-of-state private companies would feed into Northwest power grid	None yet	N/A	Long-term tax revenue to the county; short-term construction revenue	Limit the number of projects that might be put in; facilitate early projects
Utility corridor	PP&L, BPA, NW gas pipeline, Pacific Gas Trans. Co.	A few miles: not much	1960s	Rent to BLM, important to companies and pump storage projects	Expect more feeder corridors, no restrictions
Decorative rock	Local individuals	Few tons/yr	Collecting since settlement, purchasing for a few yr	Total savings for all users is a few thousand dollars/yr	None
Dumps	Local individuals: former legal dumps, some illegal dumping (e.g., tires)	Occasional, enforced	Presettlement	Save landfill fees of \$4-5 and driving time/costs	Road closure will restrict access
Transfer station	1 county station for the local public in Bly	4 days/week	1 yr (a dump at site from 1900 or 1920)	Save driving time/costs	None

Table 26 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Timber harvesting and salvage	Local and out-of-area mills, local loggers, private timber companies	Usually summer/fall on BLM	Since settlement	O&C revenues, 20,000,000 bf/yr worth \$6-7 million	Expect more bidders from out of region as harvests decline throughout PNW; harvest fewer large trees, more little trees; harvest for habitat, not timber production
Planting and silvicultural treatments	Contractors, Russian and Hispanic residents, local equipment operators	Spring/summer	1960s	Seasonal employment	Reduced area of treatment, plant aspen and cottonwood, thinning for spotted owl and wildlife
Juniper removal	Local contractor	?	1992	Possible forest product source, short-term employment	Much more removal and associated employment
Camping	Mostly local, some out-of-state; usually hunters or anglers	Weekend to 2 weeks	Since 1920s	Supplies	Not much
Horse riding	Locals: adjacent landowners and from town	Day use	Since settlement	Not much	More opportunities
Mountain biking	Locals	Day use, increasing	Last 5 yr	Not much now, good potential	Provide trails?
Hunting	Mostly local, some out-of-area and guides for waterfowl	Seasonal	10,000 BC	Mostly recreational, but now some subsistence use; lots of poaching	Not much
Trapping	Locals	Seasonal	"	"	"

Table 26 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Sightseeing	Locals and tourists on Backcountry Byways, tour routes	Day use	Since autos: 1920s	Not much	Backcountry byways will increase use
Hiking	Mostly local, except for Pacific Crest Trail	Day use	Since early 60s	Not much	Potential new trail
Wildlife watching	Local, but increasing national interest; national for birds	Few days at a time	Since 20s, increasing since then	Moderate: get some regular visitors	Greater emphasis, develop areas, improve habitat
Winter sports	Locals, Medford	Day use	Skiing from late 20s, snowmobiling from 60s	Some to moderate with snowmobiles	Winter sno park proposed
OHV	Locals	Day use	1960s	Shops	More restrictions
Vandalism	Locals	Night use	Since settlement, with recent increases	Repair uses tax dollars	Expect increase with more people, signs, and targets (not RMP)
Hang gliding	Regional	Day/weekend	10 yr	Very little	Improve launch sites
Pot hunting	Local and regional	"	1906	Lots of black market value; intangible values	Road closure will reduce access
Rock hounding	Mostly local	"	1950s-60s	Little or none	No change
Star gazing	Local	Winter/spring	?	"	"

Table 26 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Shooting	Local	Day/weekend	Since settlement; increasing since 20s	Gear	May close access
Rural interface area	Local, some second homes	Constant	1960s	Increasing property values	Land exchanges
Historical home sites, trails, etc.					
Wild horses					
Film-making	Hollywood				Plan would facilitate answers on special permit requests
Irrigation	Sources, canals, storage projects				
Rights of way					Will increase
Burn barrels					
Communication sites					Will increase
Wetland restoration					Will increase

MEDFORD DISTRICT ANALYSIS

The Medford District in southwestern Oregon includes nearly all of Jackson and Josephine counties, part of Douglas County, and a small portion of Curry County. County-level economic and population data are presented in this chapter for Jackson and Josephine counties; the Roseburg District Analysis covers these data for Douglas County, and the Coos Bay District Analysis covers Curry County. Chapter sections appear below.

Population

Employment and income

- Recent trends

- Social effects

Business and industry

- Wood products industries

- Economic diversity and development

County revenues, infrastructure, and services

Stakeholders

Local stakeholders

- Local recreation stakeholders

- Local forest product stakeholders

- Other local stakeholders

Regional stakeholders

- Regional recreation stakeholders

- Regional forest product stakeholders

- Other regional stakeholders

National and international stakeholders

Population

Both Jackson and Josephine counties grew in population in the 1980s, but at much slower rates than they did in the 1970s (Table 27). Analysts attribute growth in both decades to immigration, particularly of retirees; the numbers of people over 65 increased by 42% in both counties in the 1980s, compared with a statewide increase of 29% for that age group. In 1990, the median age in both counties was higher than that for the state: 36.7 years for Jackson County and 39.9 years for Josephine County, compared with 34.5 years for Oregon. Population growth in the 1980s was diminished by substantial outmigration of industrial workers and their families early in the decade in response to rising unemployment (OED 1992a).

Much of this growth in the 1980s occurred in the cities and towns of both counties: 53% of Jackson County's growth was within the city of Medford, and 90% was in incorporated areas. The fastest growing communities were Phoenix (40% increase), Rogue River (35% increase), Talent (27% increase), and Shady Cove (23% increase). This growth was not universal, however; Butte Falls lost 41% of its population, dropping from 430 to 250, and Jacksonville lost 130 residents, for a loss of 7%. In Josephine County, most growth was concentrated in Grants Pass and its suburban communities (OED 1992a).

Both BLM staff and community leaders are conscious of social changes that are accompanying these changing demographics. The Medford Draft RMP/EIS discusses public attitudes towards resource management of newer, urban migrants compared with rural, long-term residents (USDIBLM Medford District Office 1992), and BLM staff and community leaders frequently commented on this topic in informal discussions. The Medford District Office received extensive public comment from neighbors on adjacent lands in the district who were concerned about forest practices; many of these letter writers stated that they had moved into the area in the past 10-20 years.

As in other districts, interviewees thought that immigrating retirees generally did not take active parts in their new communities. However, Jackson County interviewees talked more of the influence of families and businesspeople moving in to small communities than did interviewees from other areas. In some cases this influx was thought to revitalize the leadership of depressed areas, but in others it was thought to contribute to local tensions and conflict. A cult group is based on the fringes of Grants Pass, and a Josephine County Commissioner reports that its members are moving into local communities, which is increasing local tensions. Commissioners from both Jackson and Josephine counties reported recent visits from California gangs and skinheads who were seeking new recruits among discouraged workers, though the commissioners reported that their recruiting efforts failed.

Timber and wood products workers who did not move out of the district in the 1980s are reportedly travelling all over the state to find work while their families rely more on extended family networks for support. In interviews, people also reported that some traditionally timber-producing communities are retaining a working-class culture and population while others are moving towards tourism and services, and in others the influx of middle-class, white-collar residents is pushing out blue-collar residents. With growth in Medford and Ashland in the past 5 years, interviewees reported that the opinion in Jackson County has shifted from support for forest product manufacturing, agriculture, and other rural industries to a sense that the timber industry is a thing of the past.

Employment and income

Recent trends

Since 1975, Josephine County has had consistently higher rates of unemployment than Jackson County, and both counties have had higher rates than the state and nation (Figure 4). The recession of the late 1970s and early 1980s caused joblessness to more than double in both counties between 1978 and 1982, as layoffs in basic industries were followed by layoffs in services. Economic recovery through the middle and late 1980s translated into declining or roughly stable unemployment rates, but the 1990s brought increasing unemployment rates, with heavy job losses in the lumber and wood products sector (OED 1992a).

From 1980 to 1990, the only economic sector in Jackson County to experience a net loss of jobs was food products manufacturing, with a net loss of 130 jobs. The fastest growth in employment occurred in services (4470 new jobs, 56% growth), durable goods manufacturing other than lumber and wood products (630 new jobs, 50% growth), and trade (4080 new jobs, 34% growth). From 1990 to 1991, however, all economic sectors other than trade and services lost employment in Jackson County. This reduction was led by the loss of 1070 jobs in the lumber and wood products sector, a reduction of 20% (OED 1992a).

Josephine County recorded net employment losses in lumber and wood products (230 jobs, 10% reduction), food products manufacturing (20 jobs, 29% reduction), and government (220 jobs, 6% reduction) from 1980 to 1990. As in Jackson County, the greatest growth during the 1980s occurred in durable goods manufacturing other than lumber and wood products (590 new jobs, 66% growth), services (1290 new jobs, 46% growth), and trade (1110 new jobs, 29% growth). From 1990 to 1991, all economic sectors other than trade, services, and transportation/communication/utilities lost jobs, with the greatest loss in lumber and wood products: 290 jobs, 15% reduction (OED 1992a).

Average annual wages for all economic sectors in 1990 was \$18,910 in Jackson County and \$17,168 in Josephine County, both lower than the state average of \$21,325. Wages in lumber and wood products averaged \$25,104 and \$22,721; in other manufacturing, wages averaged \$21,948 and \$20,029, in Jackson and Josephine counties, respectively. In contrast, average pay in retail trade was \$12,194 and \$12,070; and average pay in services was \$17,094 and \$14,380 in 1990 (OED 1992a).

Transfer payments have increased as a proportion of total personal income in both counties in the past two decades (Table 28). In 1989, earnings made up 60% of Jackson County's and 50% of Josephine County's total personal income; the remainder was transfer payments, dividends, interest, and rent. The influx of retirees, along with the general aging of the population, accounts for the increasing importance of unearned income to the economies of these two counties. Analysts note the largest growth in transfer payments in the last 20 years has been in government medical payments to residents of Jackson and Josephine counties (OED 1992a).

Per capita income and poverty rates show that Jackson County fared better during the 1970s and 1980s than did Josephine County (Tables 27-28). Among the counties covered by this study, Josephine County had the highest poverty rate in 1990, and in 1989, it ranked last among all Oregon counties in per capita income, as it had for much of the decade (OED 1992a).

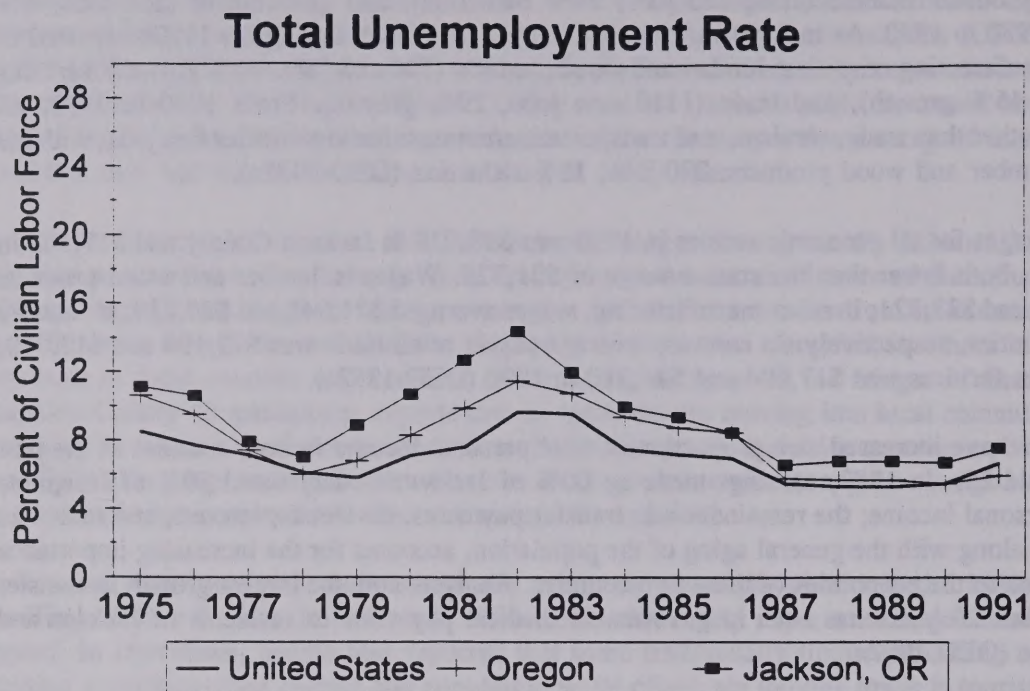
Social effects

In interviews, people described what they saw as the development of a two-class system in the Medford District, particularly in rural areas experiencing influxes of well-to-do immigrants. Newcomers were seen buying or building expensive homes, while middle-income rural residents, many of whom were traditionally sustained directly or indirectly by timber manufacturing jobs, were losing economic ground as shifts were curtailed and people moved into lower-paying trade and service jobs or left the area.

In interviews, people spoke about different experiences of unemployment among workers in the lumber and wood products sector. For some people (more often millworkers), cutbacks provided an opportunity to retrain for work they preferred or to realize dreams of going to college or starting their own business. For many others (more often loggers), losing their job meant losing their personal identity and a way of life that they loved. Even among timber and wood products workers who remained employed, the pervasive denigration of loggers that some perceived in the media and society in general was thought to be a source of considerable psychic stress.

Loss of identity was perceived not only among individuals, but among towns and cities that had experienced large job losses in lumber and wood products. One person commented that Grants Pass in Josephine County had recovered economically from the recession of the early 1980s, but it was still struggling psychologically. Interviewees described how the closure of a mill could mean not only the loss

Figure 4. -- Unemployment rates for Jackson and Josephine counties (Bureau of Labor Statistics).



Note: County estimates are less reliable than state estimates due to estimation procedure.

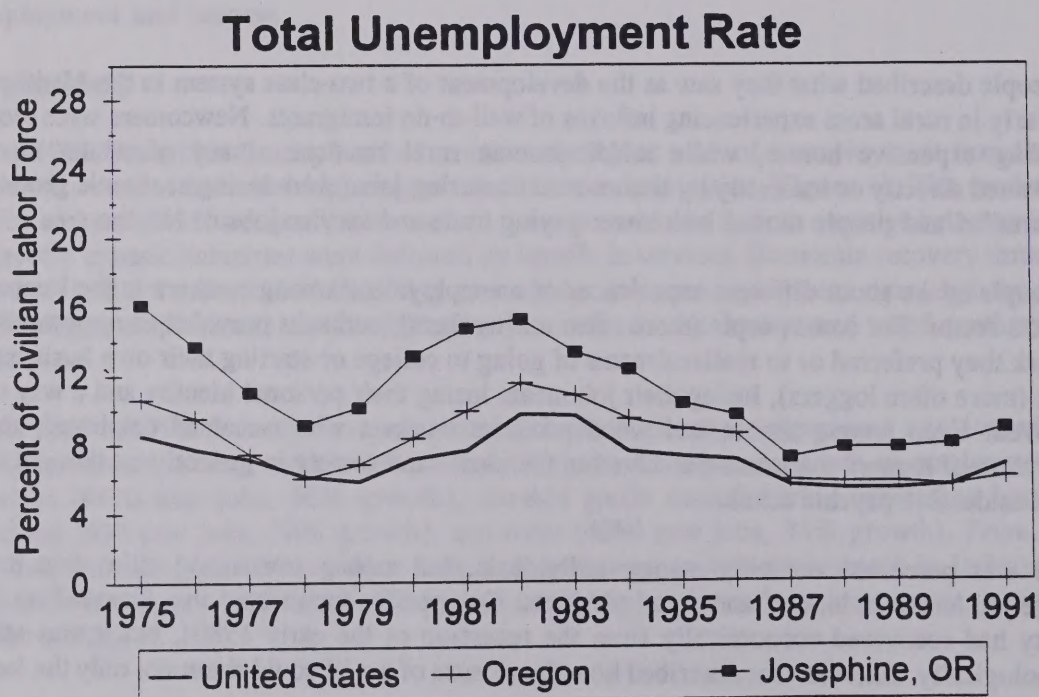


Table 27. -- Demographic data for Jackson and Josephine counties (U.S. Bureau of Census). All percentages are percent of total population.

Demographic measure and county	1970	1980	1990
Total population			
Jackson	94,533	132,456	146,389
Josephine	37,746	58,855	62,649
Urban population			
Jackson	55.2%	58.9%	65.2%
Josephine	51.9%	39.0%	40.2%
Population 65+			
Jackson	11.9%	12.6%	16.2%
Josephine	15.5%	15.2%	20.5%
Persons who moved into county since 1985			
Jackson			27%
Josephine			27%
Persons below poverty level			
Jackson	12.6%	12.0%	13.2%
Josephine	16.8%	15.6%	18.3%

Table 28. -- Income data for Jackson and Josephine counties (U.S. Bureau of Economic Analysis). Percentages are percent of total personal income.

Income measure and county	1970	1980	1990
Total personal income (Millions of 1987 dollars)			
Jackson	\$889.3	\$1,622.2	\$2,003.3
Josephine	\$335.6	\$639.4	\$776.2
Per capita income (1987 dollars)			
Jackson	\$9,326	\$12,202	\$13,585
Josephine	\$9,244	\$10,794	\$12,328
Income from transfer payments			
Jackson	14.1%	17.6%	19.4%
Josephine	19.0%	23.0%	25.9%
Income from lumber and wood products sector			
Jackson	13.9%	10.2%	7.3%
Josephine	13.9%	10.9%	6.3%

of jobs, but the loss of a company with a commitment to invest in its local community, economically and otherwise, that is rarely replaced by an influx of franchises of national companies.

The interview data cited in this section, like the interview data cited throughout this chapter, represent the opinions of a small sample of community leaders in the Medford District. While some of these opinions are tested against other data sources presented in this chapter and the Western Oregon Analysis chapter, for the most part, information needed to confirm or revise these opinions still needs to be collected at the district level. Districts could collect and analyze much of this information themselves, through examining their own records and obtaining information from local governments, businesses, and service providers.

Business and industry

Wood products industries

From 1980 to May 1993, 12 mills closed in Jackson and Josephine counties; half of these closures occurred in 1991-1993, and three fourths of these closures were in Jackson County. Jackson County lost 3 mills in 1982-1984; Josephine County lost a plywood mill in 1988 in Grants Pass and two sawmills in 1990-1991 in Grants Pass and Williams. In Jackson County since 1991, 1 sawmill has closed in Central Point and 4 plywood/veneer mills have closed, 3 in Medford and 1 in Rogue River (Ehinger 1993). Analysts attribute recent cutbacks in the lumber and wood products sector to a combination of recession-driven reductions in demand and constricted timber supply; continued restrictions in federal supply are expected to constrain recovery in this sector, even as demand increases (OED 1992a).

Opinion differed among interviewees as to the likely local effects of timber harvest levels under Option 9 of the FEMAT Report. (Some argued that because harvest levels would be decided by the courts, making predictions from agency plans was a pointless exercise.) Among those who thought the question worth answering, some thought that most closures and job losses in the lumber and wood products sector that would happen had already occurred, while others anticipated more severe effects, particularly in small, rural towns, with mills continuing to cut back operations or closing. Among those predicting more reductions, larger, more efficient mills were predicted to outcompete small- and medium-sized mills, with the possible exception of small mills manufacturing specialty products. International corporations with interests in other regions such as the Southeast were predicted to move out of the area.

In interviews, people reported dramatic increases in timber harvests in recent years among non-industrial private owners who were concerned that zoning regulations could prevent them from cutting their trees in the future. Economic analysts also note that harvest from private, nonindustrial lands increased in the late 1980s (OED 1992a).

Economic diversity and development

In 1989, services provided the greatest share (24%) of earnings in both Jackson and Josephine counties. Manufacture of durable goods contributed 22% of Josephine County's earnings and 17% of Jackson County's earnings. Other important sectors included government (16% of earnings in both counties) and retail trade (14-15% of earnings). Agriculture, dominated by pear orchards in Jackson County, and dairy and cattle in Josephine County, contributed 1.3-1.7% of county earnings in 1989 (OED 1992a).

Growth in manufacturing in Jackson and Josephine counties in the 1980s was led by growth in electronics-related industries, fabricated metals and machinery, and printing and publishing. Growth in services and trade, which accounted for over 90% of new nonmanufacturing jobs in the 1980s, is fueled by the influx of retirees and the growing importance of the area as a regional center for services and retail trade. The 1986 opening of the Rogue Valley Mall in Medford and the continued importance of mail-order sales in Jackson County contributed to Jackson County's rank of 6th in the state in total retail sales volume in 1987; Josephine County ranked 10th in the same year (OED 1992a).

Economic development strategies among rural communities in the Medford District largely target tourism, and in the Upper Rogue and Illinois valleys, small towns have formed cooperative associations to promote tourism and economic development. In the Applegate Valley, a partnership has been formed among diverse local resource management interests to address the future of resource management and the communities in the valley. Tourism is already prominent in the region, both nature- and arts-oriented; fishing and rafting on the Rogue River and the Ashland Shakespeare Festival were often cited in interviews as major draws in the region. Chamber of Commerce offices in Medford and Grants Pass advertise a wide array of retirement facilities and services.

Rogue Community College in Grants Pass and Southern Oregon State College in Ashland provide business services and training in the Medford District, while Southern Oregon Regional Economic Development promotes economic development in both Jackson and Josephine counties.

While all interviewees discussed the diversification of the region's economy, not all expressed unequivocal approval of these trends. Some were concerned with the emphasis on tourism, which they thought would produce highly seasonal employment at low wages in their communities, rather than stable, year-round employment. Some described social changes that came with diversification; as new businesses brought in new employees, the character and identity of a community was felt to change. This was often perceived as a double loss, for these communities had already suffered a loss of identity with the decline and closure of timber-based mills. Those concerned with issues of identity and economic diversification often advocated keeping a stable, resource-producing base of timber and agriculture in the area that could provide a sense of community continuity in the face of changes in other economic sectors.

County revenues, infrastructure, and services

In Jackson and Josephine counties, federal forest receipts have been equivalent to roughly half of county expenditures in recent years (Table 7). In both counties, BLM receipts were at least three times greater in amount than USFS receipts in 1989-1991 (Table 7, Bray and Lee 1991, Lee et al. 1991).

In 1990-1991, health and law enforcement departments in Jackson and Josephine counties were estimated to be most dependent on O&C revenues, receiving 22-31% of their total budgets from this source (Lee et al. 1991). Health service providers in Jackson County were unable to meet existing levels of need in 1990-1991 and predicted that need would increase with unemployment caused by federal forest plans. Satellite clinics would be closed and preventative and mental health programs would be reduced, while emergency care would become the standard. Fees would likely be increased. In Josephine County at the time of Lee et al.'s (1991) interviews, the Health and Human Services department was awaiting the outcome of a levy vote; if the levy did not pass, 18 full-time equivalent positions would be cut in Public Health. Preventative care and educational programs were expected to be eliminated as the county became the primary care provider to the unemployed and working poor. Josephine County providers were trying

to coordinate their services with other agencies and clinics to avoid duplication of services; they were also becoming coordinators of local resources for the unemployed, e.g., organizing food and clothing drives (Lee et al. 1991).

Jackson County law enforcement officials predicted in 1990-1991 that patrols and officer training would be cut and capital improvements would be curtailed or cancelled. As a result, they anticipated increased response time to reported property crimes and increased difficulty providing emergency services. At the same time, they anticipated increases in domestic violence and drug- and alcohol-related crime as consequences of unemployment. Josephine County officials predicted similar cutbacks in service and increases in crime. They also noted that the county jail was already experiencing overcrowding, and reduced revenues would hamper investigations by the Prosecutor's office, delay bringing suspects to trial, and possibly increase plea-bargaining (Lee et al. 1991).

In 1993, a Jackson County Commissioner reported that the county had been cutting employees as O&C revenues had fallen in the past 3 years. The county was computerizing a lot more of its work, privatizing some of its services, e.g., public works and parks, and combining some departments in efforts to save money. The county was also trying some innovative public safety approaches such as home detention, but had not worked out how to deal with increasing public safety needs on reduced budgets. The Commissioner reported that the county would need to start cutting services soon, which would increase local frustration with government in general, something county officials were already handling as a consequence of state and federal policies that affected county residents. Another concern was the county's ability to continue to pay wages at a level that would attract and retain competent workers.

In Josephine County, services had already been cut by 1993: a County Commissioner reported that the library had closed last year and predicted that the county would lose just about every service except for emergency services with a continued decline of federal forest revenues. County residents were thought to be unable and/or unwilling to pay more taxes to make up the difference, and were becoming increasingly unhappy with government, which further hampered local governments' efforts to operate. In the meantime, the immigration of retirees was thought to be building demand for public services, in addition to increased demand brought about by unemployment.

Local school districts in Jackson and Josephine counties were feeling the effects of Ballot Measure 5, with at least two communities changing to 4-day school weeks in efforts to reduce costs, according to interviewees.

Stakeholders

The following discussion of Medford District stakeholders is drawn from the focus group with District employees in August 1993, which produced the information in Table 29, and from public comment letters sent to the District Office about the Draft RMP by December 1992. This analysis provides "best guesses" about the people who are most directly affected by BLM land management in the Medford District. It can be used as a starting point for more in-depth analyses, which were beyond the scope of this study, but it should not, in itself, be considered entirely conclusive. The focus group also revealed rapid recent changes in resource use on BLM lands, e.g., in special forest products collection and new forms of recreation, that could alter the stakeholder groups over the next several years.

Local stakeholders

Local recreation stakeholders. -- Local residents are the main users of BLM lands in the Medford District for dispersed recreational activities, e.g., hiking; riding horses, OHVs, or mountain bikes; skiing; snowmobiling; etc.; according to focus group participants. Public comment letters indicated that snowmobilers and off-road motorcyclists expected to be negatively affected by closures and restrictions under the RMP Preferred Alternative that they did not consider to be justified by the environmental impact of their recreation activities. Access to BLM lands for these uses carried particular significance to writers who claimed disabilities that prevented them from travelling on foot and to writers who worked in the timber industry: one snowmobiler commented "The spotted owl has taken my employment. Now you are trying to restrict my recreation! What is next? Enough is enough!"

Local forest product stakeholders. -- Local and regional mills and workers harvest and process timber from the Medford District and complete silvicultural and site preparation treatments on District lands. Local residents harvest berries, Christmas trees, mushrooms, and firewood for their personal use, and also collect mushrooms, boughs, firewood, cones, and madrone burls commercially to earn supplemental income. Mushroom wholesalers are able to earn a living from their work in the area.

Other local stakeholders. -- Rural interface residents are one of the most vocal stakeholder groups in the Medford District, judging from public comment on the Draft RMP. They wrote about a variety of concerns for different areas of BLM land, but the major issues in many letters were 1) requests for special designations (e.g., Area of Critical Environmental Concern) of specific parcels to protect them from logging, 2) water quality concerns linked to herbicide use and clearcutting (concerns were for domestic water supplies and fish habitat), 3) air quality and public safety concerns related to District fire and burning policies. Timber interests also questioned the BLM's proposed fuel and fire management policies in the rural interface, e.g., the wisdom of prescribed burning near peoples' homes. Some rural interface residents also own homes on lands that are leased from the BLM, and others use rights of way through BLM lands for access to their homes.

As in the Eugene District, small-scale miners anticipated negative effects of changes in rules for mining operations on BLM lands, e.g., through occupancy rules, specifications of work times and seasons, and withdrawal of areas with mining claims filed on them to develop recreational mining areas.

Some Medford District BLM lands were thought to be of religious significance to Native Americans groups in the area.

Illegal uses of BLM lands in the Medford District include vandalism and shooting, marijuana plots and drug labs, arson, dumping, and pot hunting at archaeological sites.

Regional stakeholders

Regional recreation stakeholders. -- Although local residents are the dominant users of BLM lands for most recreational activities, hunting, fishing, and sightseeing also attract visitors from outside the District. Hunters and anglers employ local guides, and some tourists provide business for local outfitters and dude ranches, as well as local restaurants, hotels, and stores.

Regional forest product stakeholders. -- Regional mills and contract crews for site preparation and silvicultural treatments benefit from BLM timber harvests in the Medford District. Commercial collectors of forest products from outside the District join locals in harvesting mushrooms and boughs, and are the main collectors of manzanita branches. Woodworkers on the Oregon Coast make use of madrone burls collected by locals in the Medford District.

Other regional stakeholders. -- Communication sites, powerlines, and gaslines are all uses of District lands, and presumably serve people outside the District, and possibly the region (western Oregon/northern California).

National and international stakeholders

River rafting services in the District are used by international and regional visitors, as well as local residents. Local guides, raft sale and rental businesses, restaurants, and hotels profit from this activity.

Beargrass collectors travel from Tacoma and California to harvest in the District, while Canadians have collected manzanita branches in the District in the past. The markets for many timber and non-timber forest products are international, including Asia and Germany.

Movie-making also brings people to the District, and crews were reported to spend millions of dollars in the local area, mostly on services, according to focus group participants. Participants also noted the use of District lands for military exercises.

Table 29. -- Human uses of Medford District BLM lands: results of August 1993 focus group. These preliminary data are "best guesses" of focus group participants. Question marks and empty cells indicate areas for further study.

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Rafting	Guides and private rafters from local to international areas	Day use to 3-day trips	Last 15-20 yr, with real increase in last few yr	Tens of millions: raft sale and rental places, summer jobs, fulltime guides, local hotels	Will increase with more emphasis on tourism; no other change
Movie making	Hollywood and some locals - also commercials, river videos	Every 2-3 yr	Started in 50s or 60s, has increased in last 20 yr	\$8-12 million spent within district on the last movie, mostly on services	None
Timber harvest helicopter cat horse cable other	Millowners and workers, mostly from within district, Roseburg, and Happy Camp, CA; mostly local truck drivers; mostly local woodworkers, some from CA and ID, mostly small contractors (2-200 people operations); purchasers of wood products; logging supply and equipment service companies	Year-round with closures sometimes for snow and fire	Since early 1900s	Lots: chokersettlers and other woodworkers earn \$8.50-14/hr; fallers earn \$200-250/day; millworkers earn \$10+ /hr	Large decrease in harvest levels, though harvests of smaller trees will be more labor-intensive; helilogging will decline by less than other methods; horse logging will remain steady but still minor; cable and cat logging will really take the brunt of harvest reductions
Reforestation and site preparation	Contract crews: local and migrant Hispanics, and Russians from the Willamette Valley	Planting is in late winter-spring, but year-round activity	1954	Several million in contracts each year; workers (supposedly) paid \$7-10/hr plus benefits	Tree planting will drop dramatically, as will site prep with lower harvests; less burning will mean higher site prep costs

Table 29 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Silvicultural treatments	Local and out-of-district contractors: commercial thinning by timber harvest crews, precommercial thinning by site prep crews	Year-round	Last 20 yr or less	"	Precommercial and commercial thinning will increase
Mushrooms	Private and commercial collectors, latter mostly from off-district, with some unemployed locals	Spring and fall, for a couple of weeks to months	Commercial collection since 1978, with real increases in past 5 yr	Tax-free supplemental income: \$8-10,000/yr maximum; livelihoods for wholesalers	More permit restrictions; anticipate higher demand; more production is fire-driven, so more supply will vary with fires; road closures will limit access
Beargrass	Cambodians and Thai families from Tacoma, some from CA	3 months in winter - stay for 7-10 days at a time	Last 5 yr	Don't know	More permit restrictions; anticipate higher demand; road closures will limit access
Cedar, fir, and oak boughs	Commercial collecting by local Hispanics, and a few from out of the area	Fall	10-15 yr for commercial collection	Supplemental income	"
Cones	Locals	Seasonal	30 yr or more	Supplemental income	"
Berries	Locals for home use	Seasonal	Forever	Home use	Road closures will limit access; aging local population will be less able to gather stuff

Table 29 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Firewood	Locals: commercial and for home use	Usually fall to spring	Long time; declining some recently	Private use; livelihood and supplemental income for commercial cutters	" and more permit restrictions; areas will be closed to firewood collection; county air quality restrictions will decrease demand
Madrone burls	Commercial collection by locals for export to Germany and Oregon coast	Market-driven, but mostly in spring	Last 4 yr - not much left	Supplemental income	More permit restrictions; road closures will limit access
Manzanita branches	Some collections by Canadians in past; currently in-state collectors				
Christmas trees	Locals	3000/yr			
Backcountry byways	Tourists	Day use			Increased emphasis
Hunting	Guides, though not in the numbers like fishing guides, more locals	Day to week-long use	Fewer guides; big increases in elk and turkey hunting; deer hunting increasing too		Road closures will limit access; fewer clearcuts will diminish game populations

Table 29 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Fishing	Local guides, outsiders, and locals	Day use by locals, 3-day trips by out-of-staters	Getting more guides		No change in access; may improve with better habitat on BLM lands, but private lands have a large impact too
Dispersed recreation	Mostly locals, but getting more outsiders with backcountry byways and a mountain bike route	Year-round day and weekend use	Has increased over the years	Gas, sporting goods stores; some local towns are looking to shift economically to recreation and services	Will provide more opportunities; different people (affluent retirees, not woods/millworkers) will have the income to buy and use toys; will designate unimproved campsites, but not develop them
Marijuana plots and meth labs					May increase with more unemployment - depends on law enforcement
OHV	Some vocal user groups, motorcross races				Designate specific areas; more structured use; expect increased problems and conflicts
Horse riding	Mostly local users, some dude ranches and outfitters		Use is increasing		
Mountain biking					Roads will be converted to trails

Table 29 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Caving					No RMP change, but will decrease with bat protection
Runways					No change
Hang-gliding					No RMP change; anticipate increased use
Hiking					More trails
Swimming					
Boating	Jetboat races, jetskiing				
X-C skiing					
Bungee jumping	Illegal use for a TV commercial; mostly stopped				
Snowmobiling					
Tubing					
Vandalism/shooting					Expect increase with unemployment and general societal changes
Recreational mining					
Rock hunting					
Nature study, bird-watching	Some guides and tours				Will provide more areas and directions

Table 29 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Rights of way	Access to homes and communication sites				Not much change; expect increased demand
Powerlines and gaslines					"
Communication sites					
Arson					
Quarrying					Will decline
Road-building	Done by timber harvest crews				Will decline, plus lower standards for new roads
Reservoirs	Minor use				Fewer
Reclamation projects	Done by BLM staff, local contractors, volunteers for quarries and fisheries				Will increase
Leases	For cabins				Will decline, more restricted use
Homeless	Locals and migrants, including families; Umpqua NF is providing facilities				Will increase with more unemployment
Research and monitoring					Large increase
Domestic water					

Table 29 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Commercial mining					
Grazing					
Recreational farming					
Dumping					
Paintball wars					
Survivalist camp					
Sundance	Native American religions				
Rock, mountain climbing					
Military exercises					
Pot hunting	(Archaeological sites)				
Water diversions					

ROSEBURG DISTRICT ANALYSIS

The Roseburg District includes nearly all of Douglas County, except for a coastal section in the Coos Bay District. Part of southern Lane County and a small part of Jackson County also fall within the Roseburg District boundaries. County-level economic and population data are presented in this chapter for Douglas County; the Eugene District Analysis covers these data for Lane County, and the Medford District Analysis covers Jackson County. Chapter sections appear below.

Population

Employment and income

- Recent trends

- Social effects

Business and industry

- Wood products industries

- Economic diversity and development

County revenues, infrastructure, and services

Stakeholders

- Local stakeholders

 - Local recreation stakeholders

 - Local forest product stakeholders

 - Other local stakeholders

- Regional stakeholders

 - Regional recreation stakeholders

 - Regional forest product stakeholders

 - Other regional stakeholders

- National and international stakeholders

Population

As Table 30 shows, population growth in Douglas County differed greatly between the 1970s and 1980s. While the increase from 1970 to 1980 was over 30%, from 1980 to 1990, the increase was only 1%. From 1980 to 1983, 5,000 more people left Douglas County than moved in, the result of a severe economic recession. From 1984 to 1990, the county population grew slowly, with most growth concentrated in Roseburg, Sutherlin, and Winston. The towns of Canyonville, Drain, Glendale (Medford District), Myrtle Creek, Oakland, Reedsport (Coos Bay District), and Riddle still had fewer residents in 1990 than they did in 1980. The population of unincorporated areas rose slightly from 54,577 to 54,950 from 1980 to 1990 (OED 1992a).

In interviews, individuals noted an influx of wealthy, educated people from California and elsewhere throughout Douglas County in recent years, many of whom are retirees. No one noted substantial local dissatisfaction with this immigration, but one person considered the newcomers to be active participants in their local communities while another thought that most retirees did not get involved locally. Opinion also differed on what unemployed woods products workers are doing; one person thought that most were not moving, but were making do with less and with more help from extended families. Another noted that some of the more skilled workers are moving out of the county. Interviewees did not note recent ethnic changes or tensions in the county, and census data showed that minorities remained under 5% of the county population in 1990 (OED 1992a).

Table 30. -- Demographic data for Douglas County (U.S. Bureau of Census). Percentages are percent of total population.

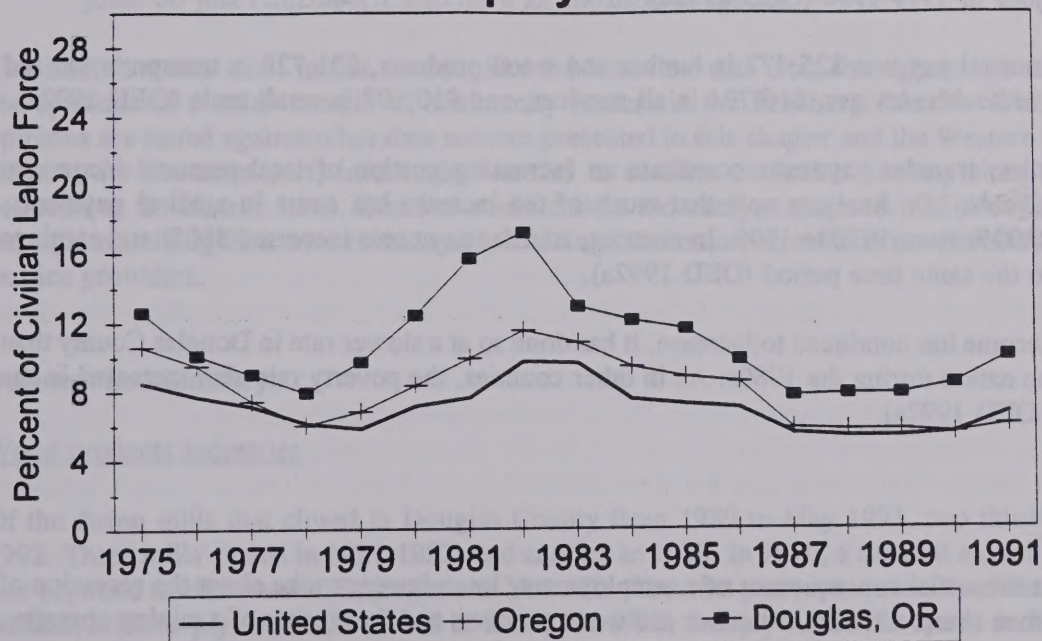
Demographic measure	1970	1980	1990
Total population	71,743	93,748	94,649
Urban population	33.9%	42.9%	52.0%
Population 65+	9.1%	10.8%	15.4%
Persons who moved into county since 1985			23%
Persons below poverty level	13.3%	11.1%	14.9%

Table 31. -- Income data for Douglas County (U.S. Bureau of Economic Analysis). Percentages are percent of total personal income.

Income measure	1970	1980	1990
Total personal income (Millions of 1987 dollars)	\$688.7	\$1,152.7	\$1,224.7
Per capita income (1987 dollars)	\$9,545	\$12,308	\$12,870
Income from transfer payments	12.0%	16.6%	20.9%
Income from lumber and wood products sector	29.9%	24.1%	19.1%

Figure 5. -- Unemployment rates for Douglas County (Bureau of Labor Statistics).

Total Unemployment Rate



Note: County estimates are less reliable than state estimates due to estimation procedure.

Net migration data support the opinion that retirees have been moving in to Douglas County (OED 1992a). At the same time, the population has aged as a consequence of a substantial outmigration of young people during the 1980s; about a third of those aged 10 to 19 in 1980 had left the county by 1990. Analysts attribute this outflow to the economic recession (OED 1992a). The median age in Douglas County in 1990 was 36.0 years, compared with a median age of 34.5 for all Oregon residents.

Employment and income

Recent trends

Recession-driven unemployment peaked in Douglas County in December 1981 at 22.9%. It fell to 7.6% by 1987 and changed little for the next several years, but it increased again in the early 1990s, a consequence of a national recession that began in mid-1990 (OED 1992a). In November 1991, it was 10.6%, and the communities of Reedsport, Glendale, Drain, and Sutherlin were particularly hard hit (Hockman 1991). The unemployment rate in Douglas County has been consistently higher than state and national rates since 1975 (Figure 5).

Periods of high unemployment have been led by job losses in the county lumber and wood products sector, which is among the sectors most sensitive to national economic changes. Despite large fluctuations in employment over the 1980s, however, the lumber and wood products sector experienced a net loss of only 120 jobs or 1.4% between 1979 and 1990. Much higher net losses occurred in mining (67% loss, 251 jobs), construction (44% loss, 680 jobs), and the manufacture of food products (53% loss, 122 jobs) and industrial machinery (40% loss, 135 jobs) in the same time period (OED 1992a).

Net growth in employment from 1979 to 1990 was led by services (54% growth, 2,054 jobs), retail trade (15% growth, 787 jobs), and transportation and utilities (34% growth, 422 jobs). Within the service sector, health services accounted for 40% of all jobs in 1990 and 32% of new jobs in 1979-1990. Within the transportation and utilities sector, trucking and warehousing accounted for 64% of all jobs in 1990 and 83% of new jobs in 1979-1990 (OED 1992a).

In 1990, average annual pay was \$25,477 in lumber and wood products, \$21,728 in transportation and utilities, \$22,668 in health services, \$16,704 in all services, and \$10,698 in retail trade (OED 1992a).

As in other counties, transfer payments constitute an increasing portion of total personal income in Douglas County (Table 31). Analysts note that much of the increase has come in medical payments, which increased 2300% from 1970 to 1990. In contrast, transfer payments increased 880% and earnings increased 412% in the same time period (OED 1992a).

While per capita income has continued to increase, it has done so at a slower rate in Douglas County than in the state and the nation during the 1980s. As in other counties, the poverty rate also increased in the 1980s (Table 30, OED 1992a).

Social effects

When asked about the social consequences of unemployment, interviewees spoke about the recession of the early 1980s, when sharp cutbacks in lumber and wood products and the closure of a mining operation

caught people by surprise. One person reported that unemployment reached 40% in the southern part of Douglas County in 1980-1982. Increases in divorce, broken families, family violence, and the number of single women on welfare were all attributed to economic strain. Among those who lost jobs and stayed in the area, many who eventually found work were thought to be working at much lower wages, which often meant that both spouses had to find work to make ends meet, when only one had worked outside the home before. Interviewees expressed concern for the children of economically and emotionally stressed parents and emphasized the importance of education in securing stable and well-paying reemployment. Workers with low education levels were thought to be most vulnerable to long-term unemployment; the County Health and Social Services Administrator stated in 1991 that one of every six individuals seeking assistance through the displaced workers' program was functionally illiterate (Hockman 1991). He also stated that family support for the elderly suffers during periods of unemployment. Employed workers often provide critical financial assistance to elderly relatives, but cannot help with relatives' utility bills, rent, and basic purchases after they lose their jobs (Hockman 1991).

Two letter writers to the Roseburg District Office testified to the personal and community effects of recent unemployment in December 1992:

Our small community of Myrtle Creek has had 4 suicides and 2 attempted suicides with ages ranging from 13 to 23 years in the last month...Our workforce at RFP [Roseburg Forest Products] was 5000 people in full force and is now down to 2500. There are no other jobs around. People 35 to 60 are working in McDonalds at low bottom wages and cannot begin to raise a family on that kind of income.

No I can't give you scientific evidence about the spotted owl. I can only tell you what impact your plan would have on our family and others like us. Yes I can be retrained and find another job. But I need more than just a job. Have you ever thought about health insurance? My wife has a rare form of cancer which costs around \$25,000 a year. So we have more at stake if we lose our job. So when you set down in your offices you need to realize there is more to this than just jobs. So just remember I also have an endangered species.

The interview data cited in this section, like the interview data cited throughout this chapter, represent the opinions of a small sample of community leaders in the Roseburg District. While some of these opinions are tested against other data sources presented in this chapter and the Western Oregon Analysis chapter, for the most part, information needed to confirm or revise these opinions still needs to be collected at the district level. Districts could collect and analyze much of this information themselves, through examining their own records and obtaining information from local governments, businesses, and service providers.

Business and industry

Wood products industries

Of the dozen mills that closed in Douglas County from 1980 to May 1993, two thirds closed in 1990-1992. Three mills closed in 1981-1982, and another in 1988. In 1990, a sawmill closed in Roseburg, and two plywood mills closed in Sutherlin and Yoncalla. The next year, two sawmills closed in Glendale and Dillard, while a plywood mill closed in Drain. In 1992, one plywood mill closed in Roseburg, as well

as a sawmill in Gardiner in the Coos Bay District. The number of jobs affected (615) by these two 1992 closures in the county was the most of any year in 1980-1992 (Ehinger 1993).

Of western Oregon counties, Douglas County shows the highest portion of total personal income from the lumber and wood products sector (Table 31). At 19.9% in 1990, this was more than double the figure for many other counties in which timber was an important component of the local economy, and well above the next highest proportion of 13.5% in Klamath County (Tables 25, 31).

In interviews, people described cycles in the timber industry in Douglas County over the past several decades and expressed the opinion that the recession of the early 1980s had weeded out all but the most efficient mills. Those remaining in the area are thought to be using increasingly sophisticated technologies and employing more highly trained workers. Shortages in supply from federal lands were forcing mills to curtail operations at the time of the interviews (late July 1993), and further curtailments were anticipated in the coming months. Supply shortages were reported to be increasing prices of wood products, placing local mills at a competitive disadvantage on the national market. One interviewee emphasized that the type of timber that the BLM offers for sale can be as important as the quantity in determining effects on the timber industry. Although mills are experimenting with new techniques and transitioning to second growth processing, small quantities of old growth are still needed to provide veneers for plywood and other wood products. BLM lands in the Coos Bay District were reported to be a primary source of old growth veneers for Douglas County mills by interviewees.

Douglas County still has the manufacturing base to bring in logs from other parts of the country, in the opinion of interviewees, but this was considered a short-term strategy. Uncertainty in the timber industry was also seen as prompting short-term management decisions and discouraging long-range investment in mills and equipment, which could place the timber industry at a disadvantage in national and international markets in future years. Among private, nonindustrial landowners, high rates of harvest of all ages of trees were noted with concern by interviewees.

Economic diversity and development

In 1989, earnings from manufacturing (mostly lumber and wood products) made up 34% of all earnings in Douglas County, compared with an average of 20% for the state. The next most important sectors in the county economy were services, which contributed 18% of all earnings, government (17%), trade (11%), transportation and utilities (7%), and agriculture (5%: OED 1992a).

Despite the continued dependence of the county on the timber industry, interviewees thought that cutbacks in the industry as a consequence of reduced federal supply would not have as strong an effect on the local economy as the recession-driven cutbacks of the early 1980s did. As explanation, they cited the diversification of the economy during the 1980s, due to both the development of new businesses and an influx of people (especially retirees) whose incomes are not linked to timber. Economic indicators from the 1990 recession offer some support for this opinion. Despite a recession-driven loss of 2,000 timber industry jobs between November 1990 and November 1991, only minor effects on trade and service employment were noted in employment data for the same time period (OED 1992a).

Interviewees reported that communities along the I-5 corridor such as Sutherlin, Myrtle Creek, Roseburg, and Green have built or are building and promoting industrial sites and enterprise zones to attract small, non-timber based industries, reportedly with success. Others, such as Canyonville, are attempting to draw

tourists from highway traffic. Umqua Community College in Roseburg and Lane Community College in Eugene were mentioned as sources of retraining for displaced workers and assistance for small business owners. Retirement and health services are also targeted for continued growth: Roseburg has three hospitals, which interviewees considered to be of high quality. Discussions of diversification and development focused on Roseburg and other communities near I-5; the future of more remote towns in Douglas County received little attention in interviews.

County revenues, infrastructure, and services

Douglas County receives over a quarter of all the O&C revenues paid to Oregon counties, the most of any Oregon county (Association of Oregon Counties). In 1991, it also received the most federal forest receipts of any western Oregon County and had the highest proportion of federal receipts to county expenditures (Table 7). These receipts were evenly divided between the Forest Service and the BLM in 1991 (Table 7), but in 1990 and 1989, O&C receipts exceeded National Forest receipts by 5 to 10 million dollars (Bray and Lee 1991, Lee et al. 1991). In 1990-1991, the county law enforcement department was estimated to be most dependent on O&C monies, which made up 16% of its budget (Lee et al. 1991).

In 1990-1991, county health service providers were anticipating that their budget would be cut by a third, which would reduce or eliminate capital investments, staff training and continuing education, and home visits. They would also be reviewing education programs funded by grants. The Director estimated that even prior to program cuts, county health and mental services were meeting only 20-25% of total need in the county. Concern was expressed for people who would not qualify for other forms of state and federal health care assistance. Law enforcement officials reported that the Sheriff's department had not fully recovered from cuts in the 1980s, and predicted that revenue reductions would represent a cut of 30-40 full-time equivalent positions, as well as a curtailment in officer training and education. The Department of Corrections would lose visiting hours and after-hours activities. The consequence of cutbacks would include increased response time to property crimes, since priority would be given to crimes against people. Substance abuse and related domestic violence were expected to increase with increasing unemployment (Lee et al. 1991).

At a BLM hearing at the end of December 1991, the Administrator of the Douglas County Department of Health and Social Services testified that if O&C receipts were reduced to \$7.5 million, the most severely impacted programs in his department would be: Health Education, County Medical Examiner, Retired Senior Volunteer Program, Area Agency on Aging, Senior Social Services, Senior Meals, In-home Services, Disease Control and Monitoring, Child Health, Prenatal, Family Planning, Mental Health Crisis and Evaluation Services, Youth and Family Services, Adult Outpatient Services, Environmental Health Epidemiology, and Environmental Health Licensed Facilities. He further noted that in 1991 his department was already experiencing increased demand from unemployment that they were unable to meet, a situation that would be exacerbated under the RMP Preferred Alternative. A clinic in Glendale was closed in November 1991 when Gregory Forest Products closed there. At the same time, Ballot Measure 5 would be causing reductions in State funding to his department. Other social and emergency service providers in Douglas County such as the Red Cross and Salvation Army were also experiencing increased demand in 1991 for emergency food and shelter (Hockman 1991).

In a December 1992 letter to the Roseburg District, the Mayor of Yoncalla wrote regarding county timber receipts, noting that county grants are used for street maintenance, and seed money from the county had gotten a local fire station established.

In interviews in July 1993, people considered a reductions in federal timber receipts to be a serious concern for county residents. The effects of Measure 5 on local education, including community college training for displaced workers, were also considered harmful. In addition to the loss of county timber revenues, people mentioned the loss of tax revenues from individuals as they lost their jobs and from mills as they closed as consequences of the BLM's RMP. One person estimated that a Douglas County mill complex made up 40% of the tax base of the small town in which it was located. In letters to the Coos Bay and Roseburg Districts, Douglas County Commissioners noted that 30% of property tax valuation is directly linked to Douglas County sawmills. They were also concerned about the negative effects of any additional acquisition of private land by the BLM on the county tax base.

Stakeholders

The following discussion of Roseburg District stakeholders is drawn from the focus group with District employees in July 1993, which produced the information in Table 32, and from public comment letters sent to the District Office about the Draft RMP by December 1992. This analysis provides "best guesses" about the people who are most directly affected by BLM land management in the Roseburg District. It can be used as a starting point for more in-depth analyses, which were beyond the scope of this study, but it should not, in itself, be considered entirely conclusive. The focus group also revealed rapid recent changes in resource use on BLM lands, e.g., in special forest products collection and new forms of recreation, that could alter the stakeholder groups over the next several years.

Local stakeholders

Local recreation stakeholders. -- Local residents are the main users of BLM lands for a variety of day-use recreational activities such as hiking, mountain biking, picnicking, swimming, OHV use, hunting, and bird watching. They are joined by people from outside the District in sightseeing and photography, camping, rafting, and fishing.

Local forest product stakeholders. -- Most harvesting, commercial thinning, and processing of timber from Roseburg BLM lands is done by loggers and millworkers within the District; Douglas County is a net importer of logs. Smaller logging companies tend to work on salvage sales in the District. Local loggers and high school students work on site preparation. Local collectors harvest cedar boughs, burls, greenery, yew bark, and firewood commercially. Local residents also collect firewood for their personal use. Public comment letters from a District hardwood mill and the Specialty Wood Products Cooperative of South West Oregon noted interest in Pacific yew and hardwoods such as maple, myrtle, chinkapin, and oak as commercially valuable species that could support secondary processing industries in the area. Local contractors work in road building and maintenance associated with timber management.

Other local stakeholders. -- A November 1992 letter from the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians noted cultural and archaeological resources in the Roseburg BLM District, as well as other western Oregon districts. They also noted concerns about any transfer of federal lands to private ownership or other BLM actions that could affect their access to aboriginal lands or their abilities to protect cultural resources and other interests.

A few local residents mine gold or graze animals on Roseburg BLM lands, which provide them with small amounts of income. Commercial mining of silver and nickel and a nickel smelter in the south half

of the district provide employment and good income when the market is strong, but not when prices are low.

At present, homelessness is not as bad as it was in the early 1980s or as it is in some other areas, according to focus group participants, but they do expect increasing uses of BLM lands by homeless locals with more unemployment.

Illegal activities on Roseburg BLM lands, which focus group participants attributed mainly to locals, include dumping by households and businesses, shooting and vandalism, marijuana growing and drug labs, and poaching. Dumping, shooting, and poaching are all expected to increase with rising unemployment.

Regional stakeholders

Regional recreation stakeholders. -- Rafting, camping, and fishing draw people from outside the District. Rafting and fishing outfitters benefit from out-of-area visitors, and anglers also support local stores, services, and resorts.

Regional forest product stakeholders. -- In contrast to all other timber management work, which is done by local residents, crews from the Salem area work on tree planting and precommercial thinning in the District. Beargrass and mushrooms are collected commercially by people from outside of the District. Southeast Asians from Washington and migrant mushroom pickers who follow the wildfires around the Northwest.

Other regional stakeholders. -- A number of state and federal research units from Washington and Oregon conduct research on District lands, as well as non-profit groups such as the Nature Conservancy.

National and international stakeholders

District fishing outfitters were thought to attract worldwide custom, and some mining claims in the district are held by Canadians. The District has been experiencing increased attention from the media in the past few years, and focus groups participants anticipate that this will continue to grow as a result of the RMP and FEMAT, which will bring international attention. No other extra-regional users of BLM lands were mentioned in the focus group, but markets for District forest products and minerals are international.

Table 32. -- Human uses of Roseburg District BLM lands: results of July 1993 focus group. These preliminary data are "best guesses" of focus group participants. Question marks and empty cells indicate areas for further study.

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Minerals gold rock: road and decorative silver nickel	Local and out-of-country (Canada); 1100 recreational and 30 "commercial" claims for gold, 15-20 individual permits for rock, 2 commercial claims for silver and nickel, 1 nickel smelter; all in south half of district	Occasional, speculative use on recreational claims; market-driven activity on commercial claims	Since 1890s; nickel is more recent	A few people live on gold claims where they are productive; silver and nickel mines and smelter provide boom/bust employment: a lot of income when prices are good; other minerals provide marginal income	Non-BLM changes in mining regulations will have effects: new restrictions on occupancy and increased cost of claims will reduce numbers
Research and monitoring	OSU, USFS PNW Research Station, UW, ODF&W, Nature Conservancy (western pond turtle study)	Used to be timber-related studies, now more wildlife	Timber research since 1940s	To universities; some seasonal employment (mostly outsiders)	Will increase significantly with monitoring, studies, adaptive management
Education	School groups, media (news, filmmakers, professional photographers)	Day use	Media interest in past 5 yr, is increasing	Minor compared to fishing, other uses	Anticipate increased interest as result of RMP: international interest
Homeless	Locals	Some-not like Eugene	Started with recession in early 80s, very little since 1985	Place to live	Will increase with more unemployment; anticipate stricter enforcement (not RMP)
Grazing	Local ranchers - small operations on adjacent lands; 17 permittees	Very little; closed grazing districts in past 5 yr	Forever	Small amount	Decline due to riparian management

Table 32 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Road building, maintenance	Local contractors, some the same as logging operations	Seasonal: drier months	1950s and 1960s	Lots: family wages	Less road-building; more riparian restoration (?), maintenance, and road closure projects; less work in these activities compared with building
Dumping	Local households and businesses: tires, appliances, occasional hazmat, mostly from meth labs	Increasing as county landfill starts charging	Since 1930s?	Hazmat contractors	Will increase with increasing unemployment
Target shooting	Locals	Increasing firepower	Increasing with growing population	Ammunition sales, sporting goods stores	" and with increased dumping
Marijuana plots and meth labs	Mostly local, some outside producers	Decreasing with indoor cultivation	Since 1960s	Lots of money	Less forestry activity will provide more incentive, but currently law enforcement is increasing too
Beargrass	Cambodians from Tacoma	Winter; 3-4 days picking, then drive back	5 yr?	Money goes to Tacoma	Proposals to restrict/control harvests; less will be available to harvest, but interest will increase with more unemployment

Table 32 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Mushrooms	People who follow wildfires, Cambodians, some Mexicans on FS lands	Seasonal	Commercial interest has increased in last 10-15 yr with recession in 1980s	Lots of money, but not a regular income; "feast or famine, mostly famine"	"
Cedar boughs	Local collectors and wholesalers	"	"	"	"
Burls	Local collectors	"	"	High value, some wholesalers in the area	"
Greenery	" (ferns, salal, etc.)	"	"	Lots of money, but not a regular income; "feast or famine, mostly famine"	"
Yew bark	Local contractor and collectors	"	Last 3-4 yr, but demand now minimal	Jobs	No changes due to BLM: market-driven
Firewood	Locals: private and commercial	Regular commercial cuts when available (not now)	Commercial collecting past 15-20 yr	A poor living for commercial collectors, also moonlighting income or stop-gap income after layoffs; important subsistence fuel source	Decreased availability with less logging; will restrict cutting of hardwoods
Camping	Half locals, half tourists from CA and all over	Overnight to 2 wk	1946?	Stores, gas stations, restaurants	New campgrounds will increase use

Table 32 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
OHV	Locals - Myrtle Creek	Occasional day use	Past 15-20 yr		Develop an OHV area, which will increase use; restrict use in other areas; surfacing on new roads will reduce mud
Day recreation	Locals - hiking, mountain biking, large group and family picnicking, swimming, diving, bird and wildlife watching	Day use	Since WWII, except mountain biking in last 5 yr		More emphasis on wildlife observation and backcountry byways; road closures will restrict access
Sightseeing and photography	Half locals, half tourists	Day use	Long time		"
Rafting	14 commercial outfitters catering to rafters from outside the area, private parties from area	Mostly seasonal, but year-round use increasing	Last 10-15 yr	Outfitters: 7 are full-time business, 7 are moonlighters	River plan will limit growth, may permit everyone
Fishing	Outfitters with worldwide custom; local anglers; fly fishermen from out of area; fishing resort	Day to month-long use	Developing since 30s (about at limit, can't expand much)	Outfitters: businesses and moonlighters, fly shops, sporting goods stores, Steamboat Inn, motels, campgrounds, restaurants, gas stations, trailer parks	Increased demand with more unemployment
Hunting	Mostly locals, a few outsiders for elk	August to January	Slight increase every year	Sporting goods stores	Road closure will change access; Roseburg will get more pressure if other districts close more roads

Table 32 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Poaching	Locals	Year-round		Subsistence	Increase with job loss
Timber harvest and commercial thinning	Local loggers	Somewhat seasonal: more in winter when FS snowed in	Several generations	Family wage	Attain a predictable harvest level, though much less than historic; all old sales cut by winter; increase in commercial thinning
Site preparation	Locals: loggers and high school students	Seasonal			
Tree planting and precommercial thinning	Hispanics from Salem, Russians from Woodburn	Seasonal	1958	Seasonal, lower wage migrant workforce; contractors make good money	Will decrease proportional to harvest reductions
Salvage logging	Smaller local logging companies	Year-round (more in spring?)	Several generations	Hand-to-mouth existence	Will decrease as areas are closed to salvage
Timber processing	Mills in district (also import logs from outside district)	Year-round	"	Family wage	Will decrease: will private timber take up some slack? Small mills will go under; 5-6 have closed in past few years
Timber transport	Truckers	"	Road transport since 1940s-50s	Family wage	Will decrease

SALEM DISTRICT ANALYSIS

The Salem District, which stretches from the Cascade crest to the coast in northwestern Oregon, covers 12 Oregon counties and a wide variety of urban and rural landscapes. These twelve counties are divided into three groups in the population and economic analyses below. Clackamas, Multnomah, and Washington counties make up the Portland Metropolitan Area. Benton, Linn, Marion, Polk, and Yamhill counties are south of the Portland Metropolitan Area along the I-5 corridor in the Willamette Valley, and include the Salem Metropolitan Area as well as more rural agricultural and forest lands. Clatsop, Columbia, Lincoln, and Tillamook counties are grouped together as "Columbia River and North Coast" counties. Linn County, in the southern part of the Salem District, also is part of the Eugene District. County-level economic and population data are presented in this chapter for Linn County and the other 11 counties in the Salem District. Chapter sections appear below.

Population

- Portland Metropolitan Area
- Willamette Valley
- Columbia River and North Coast

Employment and income

- Recent trends
 - Portland Metropolitan Area
 - Willamette Valley
 - Columbia River and North Coast

- Social effects

Business and industry

- Wood products industries
 - Portland Metropolitan Area
 - Willamette Valley
 - Columbia River and North Coast
- Economic diversity and development
 - Portland Metropolitan Area
 - Willamette Valley
 - Columbia River and North Coast

County revenues, infrastructure, and services

- Portland Metropolitan Area
- Willamette Valley
- Columbia River and North Coast

Stakeholders

- Local stakeholders
 - Local recreation stakeholders
 - Local forest product stakeholders
 - Local Native American stakeholders
 - Other local stakeholders
- Regional stakeholders
- National and international stakeholders

Population

Portland Metropolitan Area. -- Clackamas, Multnomah, and Washington counties, which make up the Portland Metropolitan Area, accounted for 59% of Oregon's population growth from 1980 to 1990 and 41% of Oregon's population in 1990. Although the region has been growing rapidly in both the 1970s and 1980s, this growth has been strongest in suburban areas and communities outside the City of Portland. From 1970 to 1980, the City of Portland lost population to suburban migration and development of residential areas for highways and other uses, among other reasons. In the early 1980s, Portland lost even more residents as a result of the recession, but it has grown rapidly since 1983, largely due to the annexation of adjoining territory in Multnomah County (OED 1992a).

While the City of Portland grew 20% from 1980 to 1990, Multnomah County showed only a 4% increase, compared with a 15% growth rate in Clackamas County and a 27% increase in Washington County. Growth in individual communities varied greatly during the 1980s, from virtually no growth to an increase of 143% in Wilsonville. Gresham, Tigard, and Tualatin doubled in population during the 1980s. The two incorporated communities that the State has included in its list of "Severely Affected Communities," Estacada and Molalla, showed higher growth rates than many other communities in the region, with increases of 42% and 22%, respectively (OED 1992a; Seidel 1993).

Analysts attribute much of this regional growth to immigration in Washington and Clackamas counties. In contrast to many other counties in western Oregon, this migration does not appear to disproportionately represent retirees. The three Portland area counties show a larger minority population than other parts of Oregon, with three groups leading: 3.9% Asian and Pacific Islanders, 3.4% Hispanic, and 3.3% Black (OED 1992a).

Willamette Valley. -- Population trends in Benton, Linn, Marion, Polk, and Yamhill counties were similar to those of the state as a whole in the 1970s and 1980s. Population grew rapidly in the 1970s, but the recession of the early 1980s caused a net outmigration from these five counties and the state during 1981-1983. Recovery from these losses occurred earlier in cities over 10,000 people than it did in the smaller communities. In 1990, nine communities still had fewer residents than they did in 1980: Adair Village in Benton County; Halsey, Mill City, Sweet Home, and Waterloo in Linn County; Detroit, Idanha, and Mt. Angel in Marion County; and Carlton in Yamhill County. Growth rates in incorporated communities that the State has designated severely affected were -9.4% in Idanha, -1.0% in Sweet Home, -0.6% in Mill City, 0.1% in Willamina, 1.6% in Brownsville, 3.1% in Harrisburg, 5.2% in Lebanon, 6.1% in Jefferson, 7.0% in Lyons, 10.8% in Gates, 11.6% in Philomath, and 12.4% in Monmouth (OED 1992a; Seidel 1993).

The proportion of the population over 65 in Linn, Marion, Polk, and Yamhill counties differed little from the Oregon value of 14.0% (Table 33). Benton County consistently shows a younger age structure than the rest of the state because of the presence of Oregon State University in Corvallis. The ethnic composition of the Willamette Valley has been changing in the past decade, due to an influx of Southeast Asian refugees and Hispanics (OED 1992a).

Demographic trends that community leaders noted in the Willamette Valley included movements of poor people from urban areas to rural communities such as Sweet Home that have comparatively low property values, and an influx of retirees drawn by the same affordable lifestyle. Several interviewees mentioned increasing urbanization in the Valley and the accompanying increase in demand for recreation sites,

expressing the opinion that some BLM lands may have higher economic value for recreation than for timber.

Columbia River and North Coast. -- Of the twelve counties in the Salem District, Clatsop, Columbia, Lincoln, and Tillamook counties have the lowest total populations and urban populations (Table 33). Clatsop, Lincoln, and Tillamook counties also have 20% or more of their population over the age of 65, a significant difference from the state average of 14% (Table 33).

All four counties grew substantially during the 1970s, but like the rest of the state, they were affected by recession-related job losses early in the 1980s. Columbia, Clatsop, and Tillamook counties experienced net outmigration during much of the 1980s, and their growth rates over the decade ranged from 1.9 to 5.4%, well below the state average of 7.9%. Lincoln County, in contrast, grew by 10.3% in the same period; analysts attribute this growth to Lincoln County's more diverse economic base, which resulted in less outmigration, and to an influx of retirees (OED 1992a).

From 1980 to 1990, five incorporated communities lost population in this region: Clatskanie and Prescott in Columbia County, Siletz in Lincoln County, and Garibaldi and Nehalem in Tillamook County. Growth rates from 1980 to 1990 in incorporated communities that the State has designated severely affected were -12.2% in Garibaldi, -1.2% in Clatskanie, 0.7% in Astoria, 1.3% in Vernonia, 6.7% in St. Helens, and 7.5% in Warrenton (OED 1992a; Seidel 1993).

In addition to having higher-than-average proportions of older people, only 6.9% of the four counties' population is between the ages of 18 and 24, compared with 9.4% for the state. Analysts attribute seasonal labor shortages in the area to this lack of young workers; in response, employers have been recruiting increasing numbers of migrants, mostly of Hispanic origin, to work in the area during the summer months (OED 1992a).

Employment and income

Recent trends

Portland Metropolitan Area. -- Unemployment in Clackamas, Multnomah, and Washington counties ran at or below state and national rates from 1975 to 1991, with slightly higher rates in Multnomah County (Figures 6-7). Employment losses due to the recession of the early 1980s peaked in 1982, with a loss of 24,000 jobs in the Portland Metropolitan Area, the largest annual loss in 30 years. By the late 1980s, however, unemployment had dropped to its lowest levels since the late 1960s, reaching 4.1% for the Portland area in 1990. A slight upturn in unemployment from 1990 to 1991 reflected the national economic recession, though Portland still felt less employment impact than the state or the nation (OED 1992a).

Losses and gains in employment during the 1980s were not evenly distributed across all economic sectors. Between 1980 and 1989, covered employment in manufacturing dropped by 9% in Multnomah County and by 2% in Washington County; it grew by 4% in Clackamas County. In contrast, employment in nonmanufacturing sectors grew by 14% in Multnomah, 48% in Clackamas, and 54% in Washington counties.

Job losses in manufacturing occurred in a wide range of industries, from lumber and wood products, to nondurable goods, to high-tech equipment. Growth in nonmanufacturing industries was led by the trade and service sectors, which together accounted for 52% of employment in the Portland area in 1990. Manufacturing accounted for 16% of total employment in the same year, compared with 20% in 1980 (OED 1992a).

Average annual pay in 1990 for manufacturing jobs in the Portland area was \$29,173. For services, it was \$20,943 (ranging from under \$11,000 for hotel and private household employment to over \$30,000 for legal and engineering services); for retail trade annual pay averaged \$13,659 in 1990 (OED 1992a).

Clackamas and Washington counties have the lowest proportion of transfer payments as part of total personal income of the counties in this study (Table 34). Multnomah, at 17.7% has a higher proportion, but it is still low compared with counties south of the Salem District. Clackamas and Washington counties also have the lowest proportions of their populations below the poverty level (Table 33). The low proportion of transfer payments and low poverty in Clackamas and Washington counties reflect their suburban character, i.e., they are home to much of the Portland area's middle and upper class workers. Middle- and high-income people live in Multnomah County as well; the three counties have the highest per capita incomes of all the western Oregon counties (Table 34).

Willamette Valley. -- Of the five Willamette Valley counties in the Salem District, Marion, Polk, and Yamhill counties have had unemployment rates that roughly followed state and national trends since 1975. To the south, unemployment rates in Benton County since 1975 have been consistently lower than state and national rates and have shown less variation. Linn County, in contrast, has shown consistently higher and more variable unemployment rates than the state and nation (Figures 7-9).

Trade and services accounted for about 35-40% of employment in all five counties in 1989. Employment in other major economic sectors was more variable. With the presence of Oregon State University in Benton County, 38% of all employment was in the government sector in 1989 in that county. Marion County, which includes the state capitol, also had high government employment (28%). Government employment ranged between 15% and 20% in the other three counties (OED 1992a).

Employment in manufacturing also varied, ranging from 13% of all employment in Marion County to 32% in Linn County in 1989. In Marion and Polk counties, manufacturing employment in food products was roughly equivalent to employment in lumber and wood products in 1989: together, these two sectors employed 7% of all workers in Marion County and 16% of all workers in Polk County. In Benton County, manufacture of machinery employed 9% of all workers, compared with 5% in lumber and wood products in 1989. In Yamhill and Linn counties, lumber and wood products remained the most important single manufacturing sector, employing 8% of all workers in Yamhill County and 13% of all workers in Linn County (OED 1992a).

Employment analysts have noted declining employment in lumber and wood products in the five-county area through the 1980s, which they attribute to increasing mechanization. Employment in "high tech" manufacturing, in contrast, grew rapidly during the 1980s in all counties but Linn. "High tech" manufacturing produces goods such as computer hardware, electronic equipment, and scientific instrumentation. Trade and services were also sources of strong employment growth during the 1980s (OED 1992a).

In 1987, average wages in high-tech manufacturing ranged from \$19,700 in Linn County to \$33,700 in Benton County. In the same year, average wages in lumber and wood products were between \$21,000 and \$23,200 and average wages in food processing were between \$15,000 and \$19,500 in the five counties. In nonmanufacturing sectors in 1987, government employment averaged \$22,900 in Benton County and \$21,700 in the other four counties. The lowest annual wages were in retail trade, ranging from \$8,900 in Benton County to \$10,700 in Linn County (OED 1992a).

The proportion of total personal income from transfer payments was lowest in Benton County at 13.7% and highest in Linn County at 20.0% (Table 34). Linn County has the lowest per capita income of counties in the Salem District, and the second lowest (after Josephine County) of all the western Oregon counties (Table 34). Despite its low per capita income, Linn County's poverty rate differs little from the poverty rates in Polk and Marion counties. Linn County's poverty rate was two percentage points less than the rate in Benton County, which had the highest per capita income among the five Willamette Valley counties in 1990. The influence of Oregon State University may explain the coexistence of high poverty and high per capita income in Benton County: university workers are paid well, but students often live on limited budgets.

Columbia River and North Coast. -- As in Curry and Coos counties on the South Coast, employment in Clatsop, Tillamook, and Lincoln counties is highly seasonal, given the importance of agriculture, tourism, fishing, and the timber industry to area economies. Inland, Columbia County experiences smaller seasonal fluctuations in employment. In recent years, annual unemployment rates in the coastal counties have been low, and summer has brought labor force shortages to some coastal communities. Analysts note, however, that the numbers of applications area employers receive when they advertise openings in higher-paying manufacturing jobs may indicate that a substantial pool of workers in the region consider themselves underemployed (OED 1992a).

Figures 10-11 show different patterns of unemployment from 1975 to 1991 in the four counties. Tillamook County recorded greater fluctuations in employment in that time period, showing a much stronger effect of the recession of the early 1980s on local employment than the other four counties. Since the late 1980s, unemployment in the coastal counties has dropped to roughly state and national levels, but in Columbia County, unemployment remained above the state average, and showed a slight increase in 1989-1991.

Employment in manufacturing ranged from 11% of all wage and salary workers in Lincoln County to 25% in Columbia County in 1990. Different manufacturing sectors led employment in each county in that year. In Clatsop County, paper and allied products manufacturing employed 9% of all wage and salary workers, followed by food products at 6% and lumber and wood products at 5%. In Columbia County, lumber and wood products led manufacturing employment, with 11% of all wage and salary employees, followed by paper and allied products at 7%. Lumber and wood products and paper and allied products each provided 3-4% of all wage and salary employment in Lincoln County. In Tillamook County, food products manufacturing employed 8% of all wage and salary workers, compared with 6% for lumber and wood products (OED 1992a).

In all counties, more people were employed in trade than services in 1990. In Lincoln County, 31% of all wage and salary employment was in trade, followed closely by Clatsop County at 30%, then Tillamook and Columbia counties at 27% and 19%. Employment in services ranged from 24% of all wage and salary workers in Lincoln County to 14% in Columbia County. Tillamook County, which contains large tracts of government-owned forests (USFS, BLM, and State), claimed the highest

Table 33. -- Demographic data for counties in the Salem District (U.S. Bureau of Census). All percentages are percent of total population.

Demographic measure and county	1970	1980	1990
Total population			
Benton	53,776	68,211	70,811
Clackamas	166,088	241,919	278,850
Clatsop	28,473	32,489	33,301
Columbia	28,790	35,646	37,557
Lincoln	25,755	35,264	38,889
Linn	71,914	89,495	91,227
Multnomah	556,667	562,640	583,887
Marion	151,309	204,692	228,483
Polk	35,349	45,203	49,541
Tillamook	17,930	21,164	21,570
Washington	157,920	245,808	311,554
Yamhill	40,213	55,332	65,551
Urban population			
Benton	65.4%	70.6%	73.6%
Clackamas	62.7%	63.1%	65.3%
Clatsop	51.4%	46.8%	54.4%
Columbia	21.6%	33.5%	35.3%
Lincoln	47.4%	45.8%	45.1%
Linn	39.8%	49.0%	51.6%
Multnomah	97.4%	98.0%	98.1%
Marion	67.0%	72.5%	74.6%
Polk	58.8%	64.7%	67.7%
Tillamook	22.1%	18.8%	18.5%
Washington	74.5%	84.7%	88.8%
Yamhill	41.4%	44.2%	53.3%
Population 65+			
Benton	6.9%	7.5%	9.8%
Clackamas	9.0%	9.4%	11.5%
Clatsop	14.3%	14.6%	16.2%
Columbia	10.3%	11.0%	12.6%
Lincoln	16.1%	16.7%	20.0%
Linn	9.6%	11.2%	14.7%
Multnomah	12.7%	13.3%	13.6%
Marion	12.3%	12.6%	14.4%
Polk	11.8%	12.6%	14.9%
Tillamook	13.4%	15.8%	20.9%
Washington	7.7%	8.3%	10.1%
Yamhill	13.3%	12.4%	13.2%

Table 33 (Continued).

Persons who moved into county since 1985			
Benton			41%
Clackamas			29%
Clatsop			30%
Columbia			23%
Lincoln			35%
Linn			24%
Multnomah			23%
Marion			25%
Polk			35%
Tillamook			27%
Washington			32%
Yamhill			31%
Persons below poverty level			
Benton		14.8%	13.6% 15.5%
Clackamas		8.3%	6.0% 6.9%
Clatsop		13.6%	11.6% 14.4%
Columbia		11.0%	9.3% 10.2%
Lincoln		14.8%	11.5% 14.4%
Linn		11.4%	12.4% 13.5%
Multnomah		11.3%	11.4% 13.1%
Marion		13.0%	10.8% 13.2%
Polk		13.7%	12.0% 13.6%
Tillamook		13.4%	10.1% 15.0%
Washington		6.3%	6.1% 6.6%
Yamhill		13.0%	10.0% 11.7%

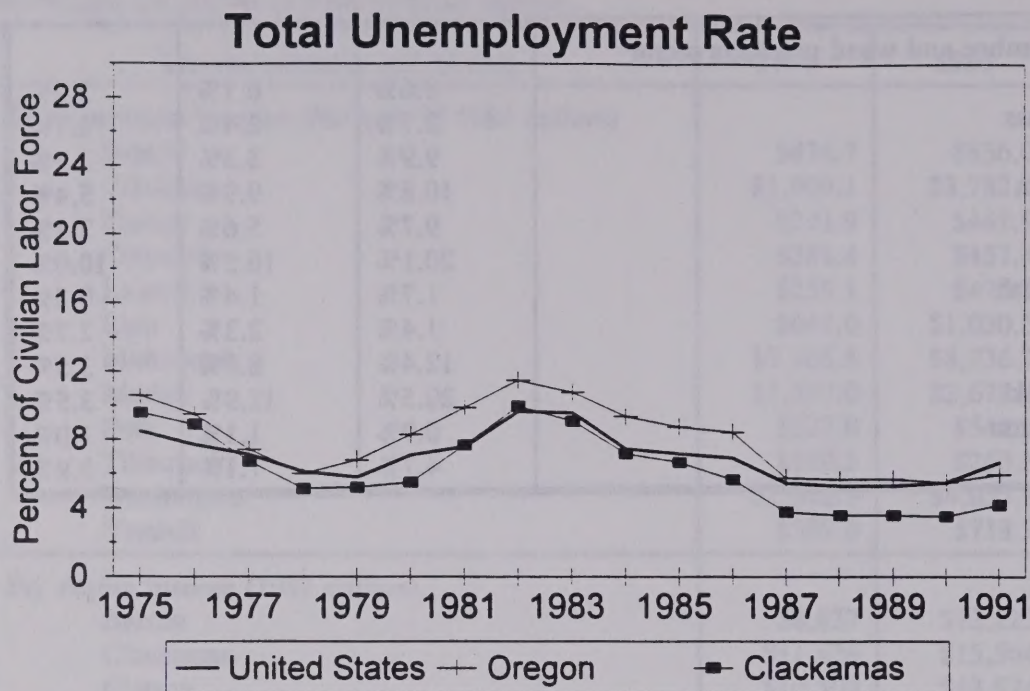
Table 34. -- Income data for counties in the Salem District (U.S. Bureau of Economic Analysis). Percentages are percent of total personal income.

Income measure and county	1970	1980	1990
Total personal income (Millions of 1987 dollars)			
Benton	\$476.7	\$836.0	\$1,022.5
Clackamas	\$1,909.1	\$3,782.4	\$4,890.7
Clatsop	\$293.9	\$441.8	\$495.4
Columbia	\$281.4	\$457.4	\$510.4
Lincoln	\$255.1	\$470.7	\$543.0
Linn	\$649.0	\$1,050.5	\$1,131.4
Multnomah	\$7,168.5	\$8,736.7	\$9,826.1
Marion	\$1,537.0	\$2,678.4	\$3,214.1
Polk	\$327.0	\$544.2	\$641.0
Tillamook	\$160.3	\$260.5	\$283.1
Washington	\$1,912.3	\$4,055.8	\$5,475.8
Yamhill	\$399.0	\$718.2	\$882.7
Per capita income (1987 dollars)			
Benton	\$8,837	\$12,223	\$14,350
Clackamas	\$11,424	\$15,564	\$17,386
Clatsop	\$10,309	\$13,574	\$14,806
Columbia	\$9,764	\$12,769	\$13,507
Lincoln	\$9,815	\$13,283	\$13,857
Linn	\$8,941	\$11,703	\$12,336
Multnomah	\$12,941	\$15,506	\$16,752
Marion	\$10,107	\$13,028	\$13,969
Polk	\$9,194	\$11,976	\$12,848
Tillamook	\$8,854	\$12,270	\$13,049
Washington	\$12,014	\$16,371	\$17,378
Yamhill	\$9,848	\$12,910	\$13,335
Income from transfer payments			
Benton		12.2%	13.7%
Clackamas		9.6%	10.2%
Clatsop		16.6%	18.6%
Columbia		14.1%	16.0%
Lincoln		18.7%	23.2%
Linn		16.4%	20.0%
Multnomah		15.5%	17.3%
Marion		16.4%	19.1%
Polk		13.6%	14.9%
Tillamook		19.6%	24.1%
Washington		8.4%	8.8%
Yamhill		14.4%	15.9%

Table 34 (Continued).

Income from lumber and wood products sector			
Benton	8.6%	6.7%	3.7%
Clackamas	2.7%	2.4%	1.1%
Clatsop	9.9%	8.3%	3.9%
Columbia	10.8%	9.9%	5.4%
Lincoln	9.7%	5.6%	2.1%
Linn	20.1%	16.5%	10.0%
Multnomah	1.7%	1.4%	0.8%
Marion	1.4%	2.3%	2.7%
Polk	12.4%	8.8%	3.5%
Tillamook	20.5%	12.9%	3.5%
Washington	0.9%	1.1%	1.0%
Yamhill	4.7%	7.1%	3.9%

Figure 6. -- Unemployment rates for Clackamas and Multnomah counties (Bureau of Labor Statistics).



Note: County estimates are less reliable than state estimates due to estimation procedure.

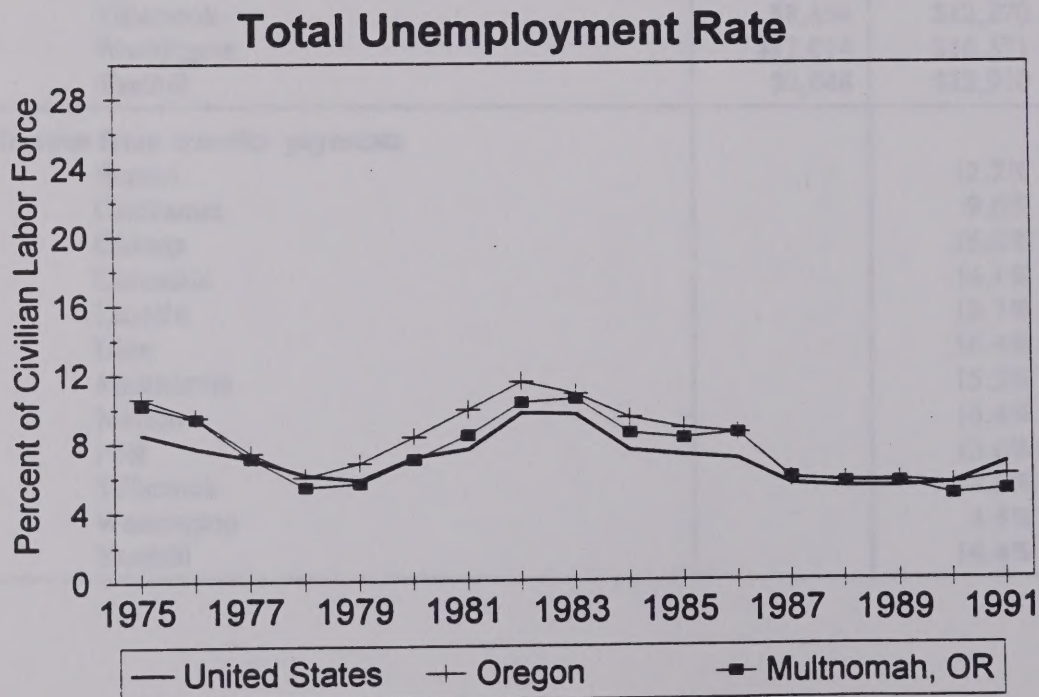
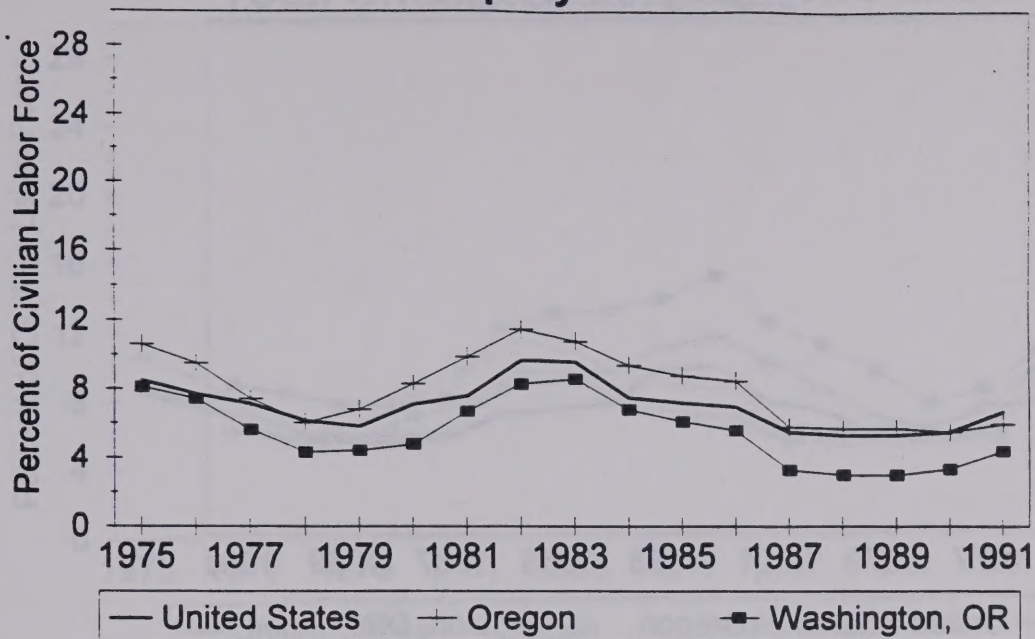


Figure 7. -- Unemployment rates for Washington and Benton counties (Bureau of Labor Statistics).

Total Unemployment Rate



Note: County estimates are less reliable than state estimates due to estimation procedure.

Total Unemployment Rate

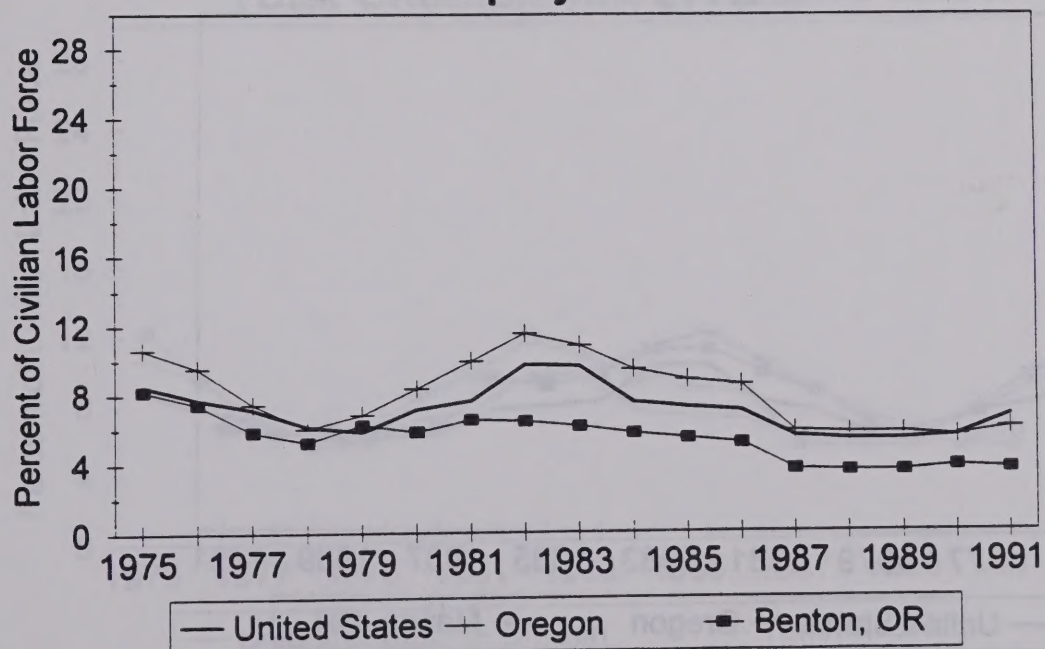
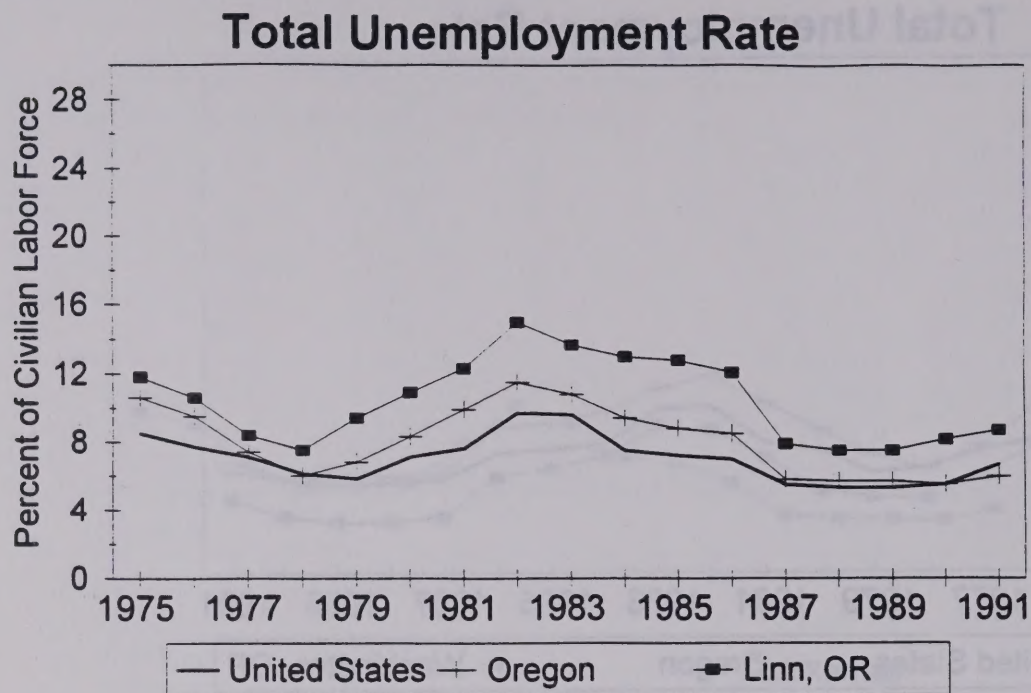


Figure 8. -- Unemployment rates for Linn and Marion counties (Bureau of Labor Statistics).



Note: County estimates are less reliable than state estimates due to estimation procedure.

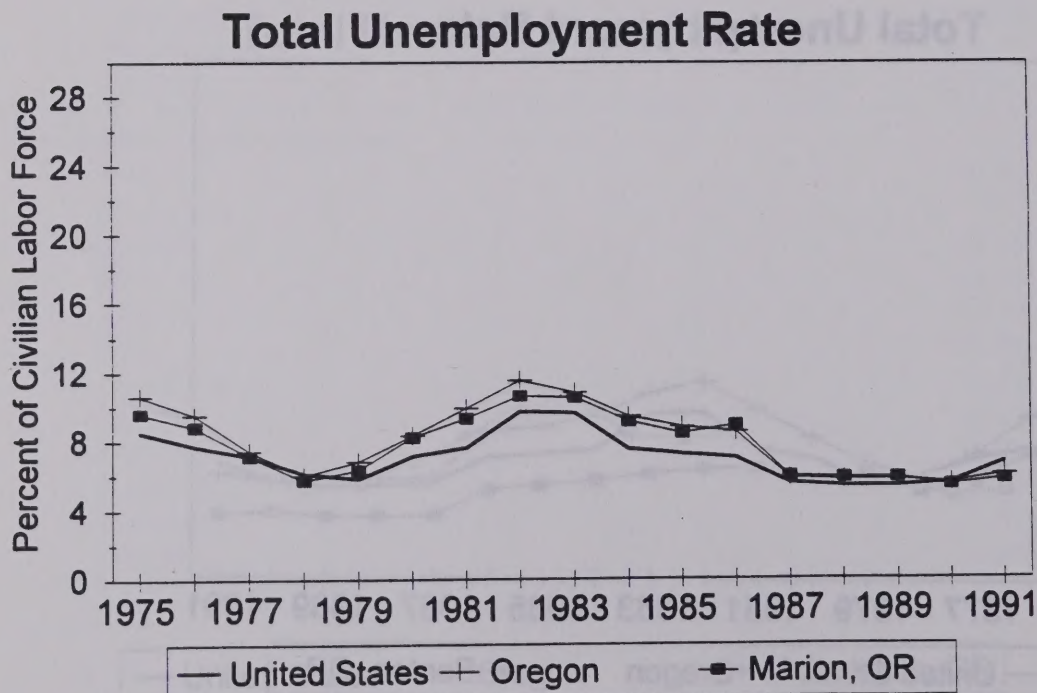
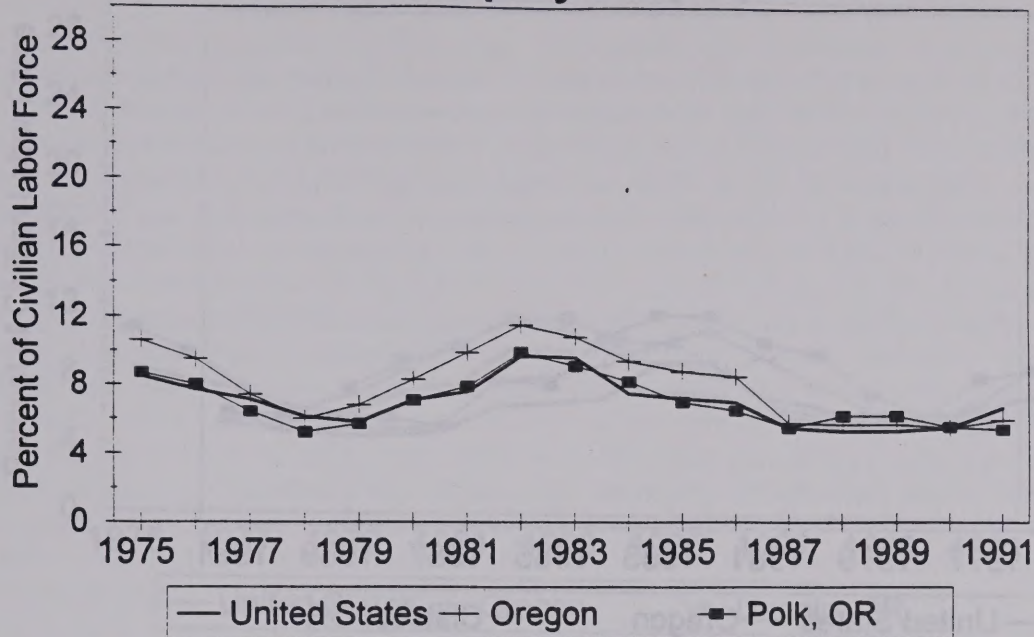


Figure 9. -- Unemployment rates for Polk and Yamhill counties (Bureau of Labor Statistics).

Total Unemployment Rate



Note: County estimates are less reliable than state estimates due to estimation procedure.

Total Unemployment Rate

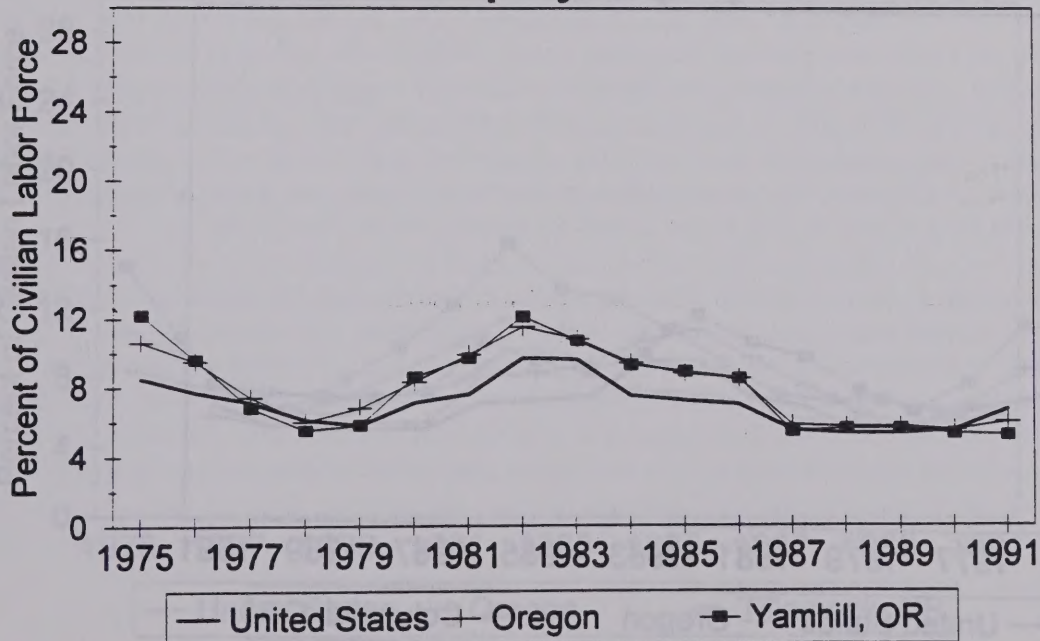
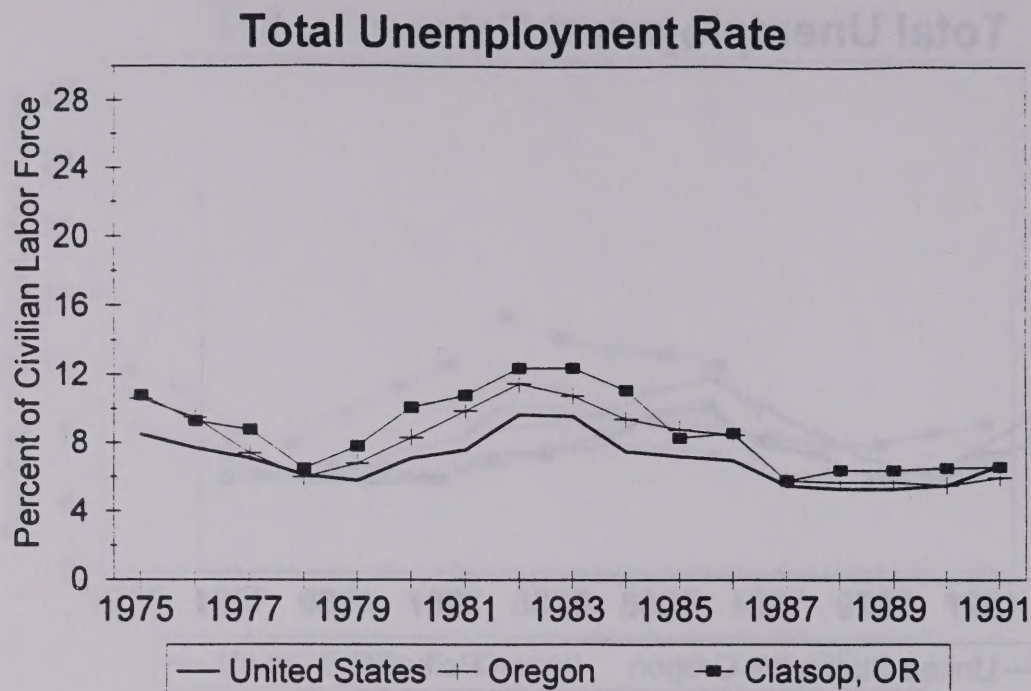


Figure 10. -- Unemployment rates for Clatsop and Columbia counties (Bureau of Labor Statistics).



Note: County estimates are less reliable than state estimates due to estimation procedure.

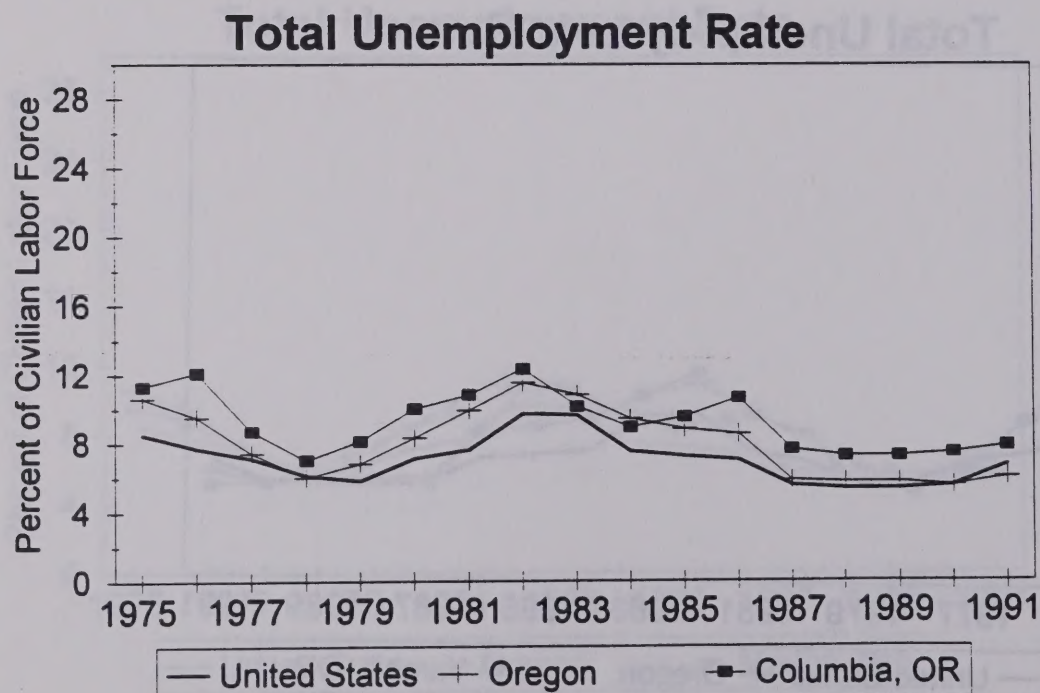
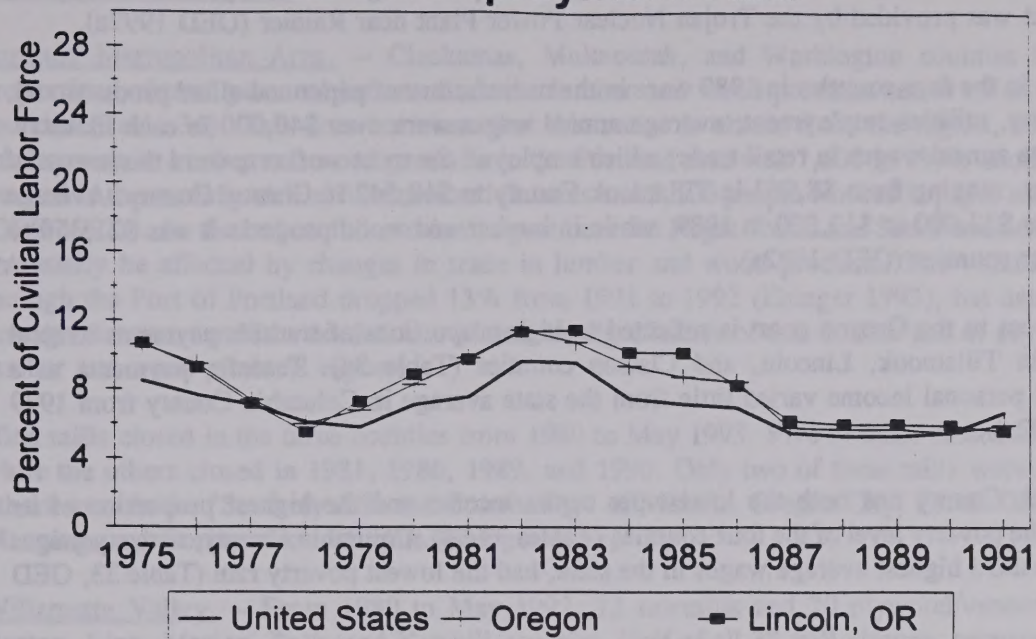


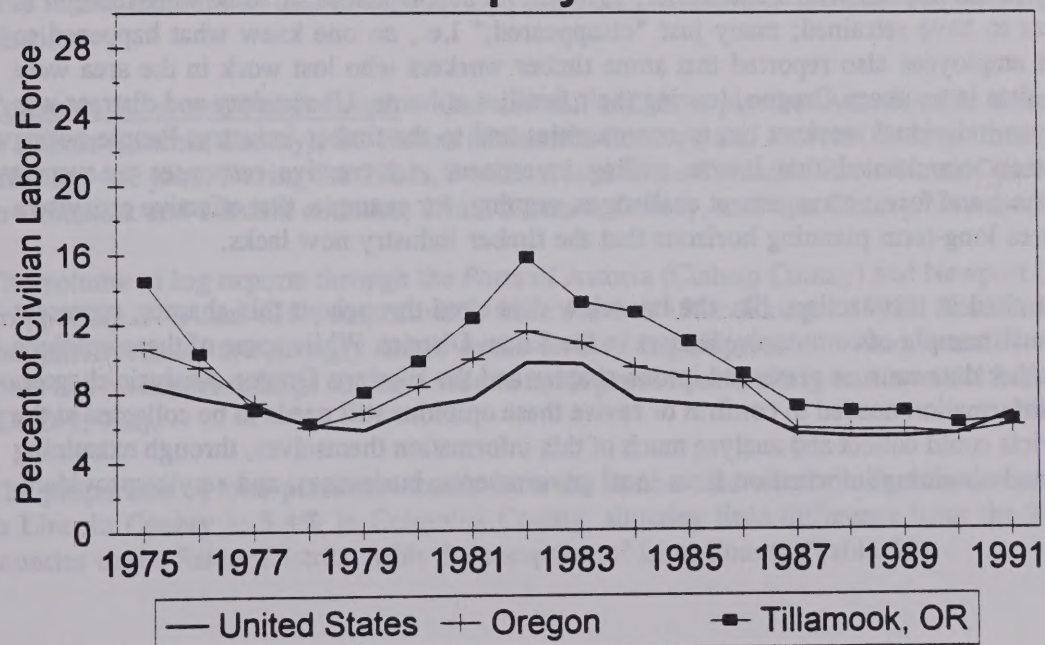
Figure 11. -- Unemployment rates for Lincoln and Tillamook counties (Bureau of Labor Statistics).

Total Unemployment Rate



Note: County estimates are less reliable than state estimates due to estimation procedure.

Total Unemployment Rate



proportion of government workers in 1990: 25% of wage and salary workers, compared with only 17% in Clatsop County, which contains no USFS or BLM lands. In Columbia County, employment in transportation, communications, and utilities was also important, providing 14% of all jobs in 1990; much of this employment was provided by the Trojan Nuclear Power Plant near Rainier (OED 1992a).

The highest wages in the four counties in 1989 were in the manufacture of paper and allied products and, in Columbia County, utilities employment; average annual wages were over \$40,000 in each industry. In contrast, average annual wages in retail trade, which employed the most workers, were the lowest of all major industries, ranging from \$8,963 in Tillamook County to \$10,542 in Clatsop County. Average pay in services was \$12,000 to \$13,500 in 1989, while in lumber and wood products it was \$21,350 to \$23,700 in the four counties (OED 1992a).

The influx of retirees to the Oregon coast is reflected in high proportions of transfer payments to total personal income in Tillamook, Lincoln, and Clatsop counties (Table 34). Transfer payments as a proportion of total personal income varied little from the state average in Columbia County from 1979 to 1990 (OED 1992a).

In 1990, Tillamook County had both the lowest per capita income and the highest proportion of its population below the poverty level of the four counties (Tables 33-34). Columbia County, with a younger population and the third highest average wages in the state, had the lowest poverty rate (Table 33, OED 1992a).

Social effects

In interviews, people predicted that the strongest effects of timber industry unemployment would occur in Linn County, though employment and workers in the Coast Range were also considered vulnerable to BLM reductions in harvest. These effects included distress among wood products workers and their families brought on by unemployment, uncertainty for the future, and their perceptions of vilification of the timber industry in the popular media and society at large. As people lost jobs, some were thought to have moved, others to have retrained; many just "disappeared," i.e., no one knew what happened to them. Salem BLM employees also reported that some timber workers who lost work in the area were travelling to work sites in southern Oregon, leaving their families at home. Uncertainty and distress was attributed not only to individual workers but to communities and to the timber industry. People noting this corporate distress commented that it was stifling investment and creative responses to current economic development and forest management challenges, arguing, for example, that effective ecosystem management requires long-term planning horizons that the timber industry now lacks.

The interview data cited in this section, like the interview data cited throughout this chapter, represent the opinions of a small sample of community leaders in the Salem District. While some of these opinions are tested against other data sources presented in this chapter and the Western Oregon Analysis chapter, for the most part, information needed to confirm or revise these opinions still needs to be collected at the district level. Districts could collect and analyze much of this information themselves, through examining their own records and obtaining information from local governments, businesses, and service providers.

Business and industry

Wood products industries

Portland Metropolitan Area. -- Clackamas, Multnomah, and Washington counties have the lowest proportions of total personal income from the lumber and wood products sector of all western Oregon counties (Table 34). This does not mean that this sector is absent from the region, however. Average employment in lumber and wood products in the Portland area was 7,600 in 1990; another 1,990 people worked in the manufacture of furniture and fixtures and 3,500 people worked in paper and allied products (OED 1992a). As the largest full-service seaport between Puget Sound and San Francisco, Portland could potentially be affected by changes in trade in lumber and wood products. The volume of log exports through the Port of Portland dropped 13% from 1991 to 1992 (Ehinger 1993), but data about all trade through the port would be needed to evaluate the significance of this decline and of any other decline in lumber and wood products exports.

Nine mills closed in the three counties from 1980 to May 1993. Five of these closed in 1991 and 1992, while the others closed in 1981, 1986, 1989, and 1990. Only two of these mills were in Portland; two others were in the "Severely Affected Community" of Molalla. Oregon City, Forest Grove, Milwaukie, Manning, and Boring also lost mills (Ehinger 1993).

Willamette Valley. -- From 1980 to May 1993, 12 sawmills and 20 plywood/veneer mills closed in Benton, Linn, Marion, Polk, and Yamhill counties. Half of all 32 mill closures occurred in 1990-1993, and Linn County led both recent and long-term losses, with 7 closures in 1990-1993 and 6 closures in 1980-1989. Benton County followed, with 3 closures in 1990-1993 and 4 closures in 1980-1989. Marion, Polk, and Yamhill counties lost 4 mills each in 1980-1993 (12 mills total: Ehinger 1993).

In terms of proportion of total personal income from the lumber and wood products sector, Linn County was over twice as dependent on timber compared with any of the other four counties in the middle Willamette Valley in 1990 (Table 34). At 10%, Linn County ranked third among the counties in the study area in this measure of timber dependency, surpassing counties in the Eugene, Medford, and Coos Bay districts.

Columbia River and North Coast. -- One sawmill and three plywood/veneer mills closed in Toledo and Waldport (Lincoln County), St. Helens (Columbia County), and Astoria (Clatsop County) in 1991-1992, affecting 455 jobs. During the 1980s, 9 mills closed in the Columbia River/North Coast counties: 3 each in Columbia and Lincoln counties, 2 in Tillamook County, and 1 in Clatsop County (Ehinger 1993).

The volume of log exports through the Ports of Astoria (Clatsop County) and Newport (Lincoln County) dropped by 34% and 43%, respectively, from 1991 to 1992 (Ehinger 1993). Economic analysts report that port revenues are strongly linked to the level of log shipments in Astoria and Newport. Thus, the 1990 ban on exports of logs cut from federal lands proved particularly controversial in these communities (OED 1992a).

The proportion of total personal income from the lumber and wood products sector ranged from 2.1% in Lincoln County to 5.4% in Columbia County, showing little difference from the Willamette Valley counties in the Salem District, with the exception of Linn County (Table 34).

Employment in lumber and wood products declined from 4,700 in 1978 to under 3,000 by 1985 in the four counties, showing no increases through 1990, even with increasing area timber harvests in 1988 and 1989. Economists attribute much of this drop to increasing mechanization in the timber industry; from 1979 to 1989, the number of workers employed for every million board feet processed in North Coast mills dropped from 3.2 to 1.8. Employment in lumber and wood products suffered in 1988-1989 from supply restrictions, as foreign log purchasers outbid local mills. In 1990-1991, the national recession further reduced lumber and wood products employment in the area (OED 1992a).

Compared with other parts of western Oregon, forest lands in the North Coast and Columbia counties and western portions of Washington, Yamhill, and Polk counties have little old growth and an abundance of older second growth, the result of major forest fires and early logging in the last two centuries. In the northwest corner of the Salem District, state and private owners control most of the forest land, and economists predict increasing levels of timber harvest from those lands in the next several decades as this older second growth is harvested (OED 1992a).

As a consequence of the forest age structure in the western Salem District, interviewees reported that mills in that area used more diverse sizes and kinds of wood than they did in other parts of the state, where old growth was more common. Thus, changes in the mix of wood provided under BLM plans could have more effect on individual mills than changes in the total volume. Another effect of reductions in overall BLM sales could be on the ability of mills to sustain a year-round supply of wood. Many mills have traditionally relied on a balance of federal and private supplies to sustain year-round operations, according to one interviewee, who described a cycle of cat and tractor logging on flatter, private lands in drier months and cable logging on steeper, federal lands throughout the year.

The paper and allied products sector in the four counties fared better than the timber industry during the 1980s, maintaining stable employment between 1982 and 1985, and then increasing by 250 jobs with the expansion of a Clatsop County mill between 1986 and 1989. The 1990-1991 recession reduced demand for paper products sufficiently to cause mills to schedule downtime or furlough workers in 1991 (OED 1992a). Economic analysts report that mills that have historically relied on federal sources of wood chips are seeking to diversify their sources of supply (OED 1992a).

Economic diversity and development

Portland Metropolitan Area. -- The Portland Metropolitan Area is the most economically diverse region of the state, which explains its comparatively easy weathering of the recessions of the early 1980s and 1990s (OED 1992a). This diversity is not evenly spread throughout Multnomah, Clackamas, and Washington counties, however. Molalla, Estacada, and Beavercreek in Clackamas County, which the state has designated "Severely Affected Communities" are examples of more rural communities that are included in the "Portland Metropolitan Area" but do not reflect the economic diversity and stability of the region as a whole.

Willamette Valley. -- As noted in previous sections, the five Willamette Valley counties have varying economic structures, from the dominance of state government in Marion and Benton county employment to a manufacturing base in lumber and wood products in Linn County. In the agricultural sector, farm income made up 6.1% of total personal income in Yamhill County, compared with 2.7% to 3.7% in the other four counties in 1989. Food processing was more important in Marion and Polk counties, however, as noted above.

As each county differs in economic structure, each has different views of needs and opportunities for economic diversification and development. Among interviewees, these needs were perceived to be strongest in Linn County, the most timber dependent and the most rural of the five Willamette Valley counties. In response to this perception, the Linn County Tourism Coalition was formed in 1989 to promote tourism and related economic development. The BLM is one of several federal, state, county, and city government and business members of the coalition, which is also supported by The Wilderness Society (Wilderness Society 1992). The North Santiam Canyon Tourism Coalition, in which the BLM also participates, promotes tourism in rural areas of Linn and Marion counties.

Economic development plans for the cities of Lebanon and Sweet Home in Linn County are targeting tourism as a development opportunity, but only as one part of strategies that include attracting new industries and businesses, developing services for residents and to attract retirees, and investing in infrastructure such as roads and schools (PPEDD 1990, 1991).

Columbia River and North Coast. -- Economists predict that tourism and retirement will continue to be the main sources of economic growth on the North Coast, though they note that some residents of smaller coastal communities such as Gearhart, Cannon Beach, Rockaway Beach, and Yachats are protesting negative social effects of unrestricted growth such as high housing prices, traffic, and strains on sewage and water systems (OED 1992a). In Columbia County, manufacturing is expected to be more important, as some services are lost to Portland and Longview providers, and high-tech and printing and publishing industries provide employment that is not directly affected by timber supply (OED 1992a).

Agriculture continues to be important in Tillamook County, where farm income made up 7.6% of total personal income in 1989, and which sold 30% of the state's dairy products. In other counties, farm income contributed 1.4-2.1% of total personal income. Fishing and seafood processing were estimated to contribute roughly 12% of total personal income in Lincoln and Clatsop counties in 1989 (OED 1992a). This natural resource industry is threatened by reductions in salmon populations and the listing of many regional salmon runs as threatened or endangered.

County revenues, infrastructure, and services

Portland Metropolitan Area. -- Clackamas, Multnomah, and Washington county governments were among the western Oregon counties that were least dependent on federal forest receipts for their operations in 1991. Clackamas County, in which 1991 BLM receipts were equivalent to 5% of county expenditures, received about the same amount from state forest revenues as it did from federal forest receipts (Table 7). In 1990, federal receipts to Clackamas County had been equivalent to 11% of County expenditures, though receipts to Multnomah and Washington counties were still only 1% of their expenditures (Lee et al. 1991). Because these counties were not very dependent on federal forest receipts, they were not examined in Lee et al.'s (1991) report on the effects of federal harvest reductions in O&C counties. Likewise, interviewees did not mention the Portland area as one that would experience significant effects from any reduction in federal payments to counties.

Willamette Valley. -- In 1991, federal forest receipts were equivalent to 6-36% of county budgets in Benton, Linn, Marion, Polk, and Yamhill counties (Table 7). At 6%, Yamhill and Marion counties were least dependent on federal receipts of these five counties. Benton and Polk counties were more dependent on federal receipts at 13% and 15%, most of which came from the BLM, and were also beneficiaries of state forest revenues in 1991. At 36% in 1991, Linn County was by far the most dependent county in

the Salem District. In 1990, federal forest receipts to Linn County had been equivalent to 40% of the county's expenditures (Lee et al. 1991). National Forest receipts contributed the large majority of Linn County's federal forest receipts in 1989, 1990, and 1991 (Table 7, Bray and Lee 1991, Lee et al. 1991).

Lee et al. (1991) studied Benton, Polk, and Linn counties in greater detail, finding that O&C receipts funded 27% of Benton County's health services budget in 1990-1991; 16% of Benton County's law enforcement budget also came from O&C monies. In Linn and Polk counties, 23-26% of the law enforcement budget came from O&C revenues, which also provided 10-11% of the assessor's budget in each county.

In 1991, health and social service providers in Benton County reported that allocation of the county general fund had shifted away from roads, in anticipation of revenue reductions that would otherwise cause health and social services to be cut. The county lost some satellite clinics in the early 1980s and was only just getting back its "well baby" clinic. Providers estimated that they were meeting half of the need in the county, and predicted increases in depression and other mental illness as a consequence of economic stress. Polk County health service providers did not anticipate that county-funded programs would be cut with declining timber receipts, though they did think reduced state revenues could result in cutbacks to their mental health programs. In Linn County in 1991, county health service providers anticipated an increase in clinic fees, though no one would be denied care because of an inability to pay, and the closure of satellite clinics. They anticipated that the State Department of Adult and Family Services would be handling most of the health and resource need of unemployed workers (Lee et al. 1991).

Law enforcement officials in Benton County reported in 1990-1991 that the Sheriff's Department had been fiscally conservative in the past decade and did not anticipate as great an impact from reduced O&C receipts as other counties would experience. They did anticipate more domestic violence and sex and substance abuse cases with greater unemployment, but based on past experience, they did not expect much increase in property crimes. Polk County officials thought differently: they had noted dramatic increases in drug and property crimes after previous cutbacks and anticipated further cutbacks in enforcement with declining O&C receipts. They anticipated inadequate responses to all but life-threatening situations after cutbacks, and predicted increases in domestic violence, conflicts, and crime with rising unemployment. In Linn County, officials expected that patrols would be cut, delaying emergency services and responses to property crimes. They also predicted cutbacks in officer training and capital improvements, and possible overcrowding in jails. They anticipated increases in drug- and alcohol-related crime, domestic violence, and property crime with unemployment (Lee et al. 1991).

In 1993, a Linn County official reported that Measure 5 had resulted in cutbacks to the county health department and that the Sheriff's department would be forced to lay off workers if a proposed levy did not pass. In the early 1980s, a loss of timber receipts had caused the county to shut down many of its parks, and the system was now being operated at a smaller scale, with greater emphasis on services for which the county could collect fees, i.e., services for wealthier campers and boaters. The loss of National Forest revenues for road departments were thought to be important to some Willamette Valley counties, though some departments were reported by interviewees to have been planning for this cutback during the 1980s and thus now have their road networks in good shape.

Columbia River and North Coast. -- Three of the four counties in this group relied on state forest revenues as a substantial portion of their county budgets in 1991 (12-19% of expenditures: Table 7). State forest revenues were less important, but not invisible, in Lincoln County's budget (3% of expenditures).

Clatsop County has no federal forest land and so receives no federal forest revenues. In Tillamook and Lincoln counties, State and National Forest revenues were markedly greater than BLM revenues in 1991 (Table 7). Only Columbia County, which has no National Forest lands, showed a strong reliance on BLM revenues, which were equal to 18% of county expenditures in 1991 and 25% of expenditures in 1990 (Table 7, Lee et al. 1991).

Lee et al. (1991) studied the budget of Columbia County in detail, finding that the law enforcement division was most dependent on O&C funds, which contributed 20% of its 1990-1991 budget. The assessor's and planning departments also received 8-9% of their budgets from O&C revenues. In 1991, county officials reported that health and mental health services were provided through a contract with a private, non-profit group. Many of their programs are funded by the state and federal governments or other grants; the county provides some financial and administrative support, which are important to their operations. Law enforcement officials anticipated increases in alcohol and drug abuse and associated domestic violence with increased unemployment, but no increase in property crimes (Lee et al. 1991).

The Oregon Employment Division echoed concerns about health service infrastructure that were raised in the Coos Bay District. They noted the 1990 closure of a hospital in Columbia County and earlier hospital closures in Lincoln and Tillamook counties, as well as difficulties among several small communities in attracting and retaining health professionals. They commented:

Many rural hospitals are running deficits as a result of low occupancy, high numbers of uninsured and indigent patients, inadequate Medicare payments, and difficulties in obtaining advanced equipment (OED 1992a, District 1, page 24).

Another infrastructure loss in rural communities as a consequence of federal forest plans and reduced county revenues is road maintenance, which was thought by interviewees to be particularly important in Lincoln County, given its large National Forest tracts. The Lincoln County road department was thought to be well prepared to deal with revenue reductions in the short term, but the combination of reduced federal and local government road maintenance was predicted to eventually harm rural residents and communities as their roads were downgraded.

Stakeholders

The following discussion of Salem District stakeholders is drawn from the focus group with District employees in July 1993, which produced the information in Table 35, and from public comment letters sent to the District Office about the Draft RMP by December 1992. This analysis provides "best guesses" about the people who are most directly affected by BLM land management in the Salem District. It can be used as a starting point for more in-depth analyses, which were beyond the scope of this study, but it should not, in itself, be considered entirely conclusive. The focus group also revealed rapid recent changes in resource use on BLM lands, e.g., in special forest products collection and new forms of recreation, that could alter the stakeholder groups over the next several years.

Local stakeholders

Local recreation stakeholders. -- Most recreationists on Salem District lands are thought to be residents of the District. Some uses, such as horse riding, are mainly by adjacent landowners and rural residents,

and OHV use attract people from greater distances within the District. Fishing and hunting contribute to local economies through work for guides and money spent on gear and travel. Focus group participants note that dude ranches are appearing in the District and requesting occasional permits for horse-riding on BLM lands; they also mentioned an ecotourism/nature study business that may start in the District.

Local forest product stakeholders. -- Local and regional workers and companies harvest timber in the Salem District, while local companies employing migrant workers work in silviculture and reforestation. Small, local companies join larger companies in salvage logging on BLM lands. Focus group participants thought that local, rural residents are the main collectors of special forest products in the District. The collectors, who generally earn supplemental income from their harvests, sell to local wholesalers, who are able to earn full-time incomes from their work. Local residents also collect firewood for their personal use and to sell commercially.

Local Native American stakeholders. -- Two federally recognized Indian tribes have off-reservation treaty rights within the Salem District. The Confederated Tribes of Siletz have fishing, hunting, and gathering rights in the Lincoln County area. The Confederated Tribes of the Warm Springs Reservation, whose reservation is located just east of the Salem District boundary, have off-reservation rights for fishing, hunting, gathering, and grazing, with an expressed interest in the eastern Salem District. (Richard Hanes, BLM Oregon State Office, personal communication).

Other local stakeholders. -- BLM lands are sources of water for rural households, irrigators, and municipalities in the District, either directly or as headwaters for the Willamette Valley.

Private property concerns prompted some adjacent landowners in rural areas to comment on the Draft RMP. The potential Wild and Scenic designation of the Alsea River and tributaries is not welcomed by some who live along the river, who fear the increases in recreational use that the designation could bring to their doorsteps. A proposed trail from Mary's Peak down the North Fork of the Alsea River that would cross private lands also drew negative comments from landowners who could be affected.

Locals have found mostly short-term work in the past few years in fish enhancement projects and cleanups of illegal dumpsites on District BLM lands, although large companies have been called in to deal with hazardous material sites. People also live on BLM lands on mining claims or as transients/homeless; focus group participants thought that both groups are quite small.

Regional stakeholders

Sport and commercial fishermen from in- and out-of-state fish in coastal waters off the Salem District. This activity supports local canneries, guides, charter boat operators, and gear suppliers. Universities and federal agencies use District BLM lands for research, as does the Berry Botanic Garden in Portland. Some mining claims on BLM lands are held by people from outside the state.

National and international stakeholders

Sightseers around Mount Hood and the Santiam area come from around the country, as well as the local area, according to focus group participants, an observation that was confirmed by a letter from the Clackamas County Council stating that the BLM ought to be focusing even more attention on scenic

values along Highway 26 because of its national visitation. The focus group also noted international markets for special forest products collected in the Salem District.

Table 35 (continued)

Use	Items for production and processing, including other off-consumers use	How Made?	How Long?	Economic benefits	Other notes
Medicinal	Leaves and roots of many plants, including some rare species, are used to make medicines.	Chopped	1-2 hrs	None	Some people use it to treat stomach pain.
Food	Leaves and roots of many plants, including some rare species, are used to make medicines.	Chopped	1-2 hrs	None	Some people use it to treat stomach pain.
Decorative	Leaves and roots of many plants, including some rare species, are used to make medicines.	Chopped	1-2 hrs	None	Some people use it to treat stomach pain.
Construction	Leaves and roots of many plants, including some rare species, are used to make medicines.	Chopped	1-2 hrs	None	Some people use it to treat stomach pain.
Other	Leaves and roots of many plants, including some rare species, are used to make medicines.	Chopped	1-2 hrs	None	Some people use it to treat stomach pain.

Table 35. -- Human uses of Salem District BLM lands: results of July 1993 focus group. These preliminary data are "best guesses" of focus group participants. Question marks and empty cells indicate areas for further study.

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Beargrass	Rural local individuals and companies, to international markets	Year-round and seasonal	Last 2 yr	Supplemental, stop-gap income for gatherers, main source of income for wholesalers	May stop? Will definitely be more regulated by BLM, though not through the RMP
Moss	"	"	10-15 yr	"	"
Mushrooms	"	"		"	"
Boughs	"	"	20 yr	"	"
Plants	"	"	10-15 yr	"	"
Firewood	Locals: personal and commercial collecting	Declining last 2-4 yr	Forever		Less slash will mean less firewood to collect
Domestic water	Rural interface residents	Declining			
Municipal water	Towns and cities				Push for free-flowing streams (no dams) will reduce municipal availability
Irrigation water	Local permittees, and downstream Willamette Valley	Seasonal	Long time		
Fish enhancement projects	Fisheries biologists, local enhancement workers, fishermen	Occasional	New in past 10 yr		Will increase. Possible stewardship contracts with locals, but most work will be short term
Illegal dump cleanup	Big companies for hazardous material sites, locals for household trash	Sporadic	Last 5 yr	Jobs	Cleanup will increase, though this is not part of the RMP

Table 35 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Visuals/ sightseeing	Locals and people driving through scenic corridors - national use around Mt. Hood and Santiam				More emphasis and opportunity with Backcountry Byways program
Recreational goldmining - panning and sluicing	Regional and local - in Santiam area	Weekend or vacation week; spring to fall	Long time	Some?? (not reported)	
Commercial mining	Local and out-of-state, claims are usually used to occupy land, not to mine it	Declining recently-never much use	1872 mining laws	Marginal	Withdraw lands from mining claims (not a big deal)
Reforestation	Migrant workers and local companies			Jobs	Will decline
Silvicultural treatments	"			Jobs	Will decline, but amount of decline unknown
Timber harvest	Local and regional companies			Jobs, county receipts, general treasury	Will decline
Salvage logging	" and small local contractors			Jobs	Will decline
Camping-developed and dispersed	Mid-Willamette Valley, mostly hunters/anglers for dispersed use	Weekend	Mid-to-late 60s	Not much	More sites will be developed, if the money is available

Table 35 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Squatting	Borderline homeless or transients, special forest product collectors, not many people	Real increase in past 5 yr as FS has been stricter	Depression era saw high use, always some use	Provides housing to users, but costs BLM	Will decline with more enforcement, but this is not part of the RMP
OHV	Locals - singles and families, motorcycles and 4WD	Weekends, organized races	Mid 60s	Not much	Much more monitoring and management; increases in targeted areas; road closures
Hiking	Sunday drivers, campers, local and regional hiking clubs, organized camps (scouts)	Day use, except in Tablerock Wilderness	Mid 60s	Negligible	More trails, more emphasis
Mountain biking	Younger people in region	Day use	3 yr, with upward trend	"	More areas, may become overnight use with Corvallis-to-the-Sea Trail
Horse riding	Adjacent landowners - rural residents and scout camps, except in Tablerock, which draws from a wider area	Day use, not widespread, mostly in Washington and Clackamas counties	Mostly since mid 60s, expecting increased use	Dude ranches are appearing - get 2-3 permit requests/yr	Corvallis-to-the-Sea and Crabtree Snow Peak trails would provide more opportunities
Hunting deer elk grouse bear	Locals, both urban and rural, guides, a few hound hunters (for bear)	Declining trend, as in nation	Forever	Food for rural people, jobs for guides, money for gear	Depends on road closures, but not a big effect; fewer clearcuts will reduce big game populations

Table 35 (Continued).

Use	User	How Much?	How Long?	Economic Benefits	RMP Change
Coastal fishing	Sport and commercial fishermen from in- and out-of-state, guides and charter boats, canneries	Slightly declining trend (varies with species)	Forever	Money for gear and travel, jobs for guides and commercial workers, food	May improve over the long term, negligible in short term
Inland fishing	Campers, anglers from local areas and Willamette Valley towns	"	"	"	"
Nature study/ observation	School groups, Audubon, scouts, hiking clubs, potential business venture	Increasing trend			Watchable wildlife areas provide more opportunity
Research	Universities, Berry Botanical Garden, Forest Service	Increasing trend			
Communication sites					
Shooting					
Picnicking					
Boating					
Oil and gas exploration					
Rural interface areas					
Wilderness					

CONCLUSION: RMP BENEFITS AND OPPORTUNITIES FOR MITIGATION

This chapter notes socioeconomic benefits of the Draft RMPs and presents some specific suggestions for ways BLM districts may mitigate some of the negative effects of the plans, given the expertise of district personnel and the legal constraints that districts currently face. Many districts are already taking some of the mitigative actions described in this chapter; thus, this chapter reinforces the importance of districts' existing efforts and encourages districts to expand these efforts and consider additional ways that they could work to mitigate the negative socioeconomic consequences of the RMPs. A comment on districts' information needs concludes the chapter. Chapter sections appear below.

Socioeconomic benefits of the RMP

Opportunities for districts to mitigate negative effects

- Unemployment in the wood products industries

- Payments to counties

- Education and youth services

- Economic development and diversification

- Access to BLM lands

- Culture of rural communities

Meeting district information needs

Socioeconomic benefits of the RMP

The environmental analyses in the Draft RMPs/EISs and FEMAT report provide numerous measures of environmental attributes that people value and how these attributes would be affected under different RMP and FEMAT options. Improvements in these environmental attributes provide a variety of socioeconomic benefits to people.

Benefits associated with improvements in some of these attributes, such as biological diversity and species survival, lie mainly in intangible realms of wisdom, emotion, spirit, and hopes for future generations. Improvements in other environmental attributes, such as visuals and aesthetics, can also provide economic benefits to some people, e.g., in their effects on property values. Improvements in air and water quality can provide intangible, economic, and health-related benefits. Changes to commercially valued environmental attributes such as fish, some plants, and timber are most easily translated into economic measures of benefit.

The stakeholder analyses showed that people around the world are affected by BLM resource management in western Oregon, but residents of that region are, in general, most strongly affected. Thus, the many socioeconomic benefits deriving from the RMPs -- be they improvements in environmental quality, more recreational opportunities, or the preservation of areas with unique biophysical or cultural histories -- will accrue, in large part, to residents of western Oregon. As this study has demonstrated, these benefits are accompanied by profound costs for some local people and more muted costs for many others, in western Oregon and more distant regions. Although it does not seem possible to make the changes that the BLM proposes without negatively affecting some people, there are also ways in which the BLM can act to mitigate some of the social costs of its RMPs.

Opportunities for districts to mitigate negative effects

Many government agencies, private organizations, and individuals are already addressing the socioeconomic consequences of federal forest policies in the Pacific Northwest. The BLM does not staff social workers, vocational advisors, economic development planners, or many of the other professionals and social service providers who are working with individuals and rural communities experiencing or anticipating socioeconomic distress. While the BLM cannot provide many needed services to affected communities and individuals, it can emphasize the importance of these services and of federal and state plans and funds to address these social needs.

In visits to western Oregon districts, it became apparent that many BLM district staff do recognize and care about current distress among individuals and communities in their districts, but feel trapped on all sides by competing interests and the constraints of recent court cases, which hinder them in efforts to develop and implement mitigative actions. The Forest Conference and FEMAT planning process have also delayed districts' efforts to complete and implement their Final RMPs.

Both the Forest Conference and the Social Assessment section of the FEMAT report addressed societal, government, and agency responses to current Northwest forest controversies and their consequences for rural communities at length. The FEMAT team also provided analyses of some of the roots of current controversies in the history and culture of the U.S., Pacific Northwest, and resource management agencies. Many of the Forest Conference/FEMAT recommendations address needs for fundamental changes in the theory and practice of resource management that need to be addressed at all levels of government. The FEMAT team also noted a number of ways to improve coordination and cooperation among federal resource management agencies (FEMAT 1993).

The purpose of the following recommendations is more specific: to provide some concrete suggestions for socioeconomic mitigation approaches that could be appropriate and feasible for districts to implement, given the social, legal, and political environments in which they will be working in coming months and years. The suggestions vary, and local managers will be best able to assess which recommendations would be most appropriate for their districts and resource areas; these suggestions are hardly exhaustive, and managers may make their best use of them as a starting point for coming up with their own approaches.

The underlying theme to all these suggestions is a simple one:

Find as many ways as possible to talk to, work with, and learn from the people who care about what is happening in each district.

Such an approach recognizes that managing BLM lands is a political task as much as it is a technical or scientific one, and to manage lands well, one must work with the people who use and value them. The goal of this approach is the cultural acceptability of resource management plans and practices, without which a resource management system or institution cannot persist (Firey 1960). Although many of the suggestions below focus on ways to further involve local and regional constituencies, national interest in BLM management in western Oregon requires involvement of national constituencies as well. Working with these multiple constituencies toward a common vision for its lands is no small challenge for the BLM, but it is necessary for resource management plans to be successfully implemented.

While individual BLM managers can be encouraged to interact with the public as noted above, the people working as managers change over time with promotions, retirement, etc. Thus, districts also need to

examine how the district as a whole interacts with its publics and how relationships, agreements, and knowledge may be maintained through changes in personnel.

One of the greatest needs among district residents and organizations, repeated in public comment on the Draft RMPs, at the Forest Conference, and in the FEMAT report, is the need for certainty and security. To plan for the future, families and communities need to know what to expect from one day and one year to the next and to have some sense of control over their lives. The BLM needs this as well. By working more closely together on resource management decisions, both the BLM and its publics will be working to meet this basic need.

Like the concept of stability as orderly change (See Community stability section in chapter 2), security and certainty need not imply the absence of change. As knowledge, environmental, and socioeconomic conditions change, resource management must also adapt, and planning and management processes that provide for regular, incremental adaptation to new knowledge and conditions will ultimately provide greater security and certainty than those that do not.

Unemployment in the wood products industries

Court injunctions currently limit the volume of timber that the BLM can offer for sale. Districts will be best able to address unemployment when they are legally permitted to sell larger volumes of timber than they can at present, but they can be working now to gather information and prepare strategies that will help them maximize the employment benefits of future sales and offset some of the employment losses that will result from lower harvest levels under the RMP.

As noted in previous chapters, the timber industry is in a state of transition for a variety of reasons other than federal timber policies, and this transition had been anticipated prior to the sale cutbacks of the 1990s. Public comment letters from the industry and timber-producing communities requested that **reductions in harvest be phased in over the life of the RMP**, to give them more time to make the necessary technical and economic transitions in mills and local economies.

The survival of mills depends not just on the quantity of wood available, but on the quality and types of wood. Districts can **talk with local and regional mills that depend on BLM timber to determine what mixes of wood they need most to stay in operation**, and examine sale strategies to better meet these needs in a manner consistent with the goals of the RMP/FEMAT. Small and specialty mills can be included in this discussion: providing small sales of hardwoods, for example, could make a real difference to some small mills and secondary manufacturers. Districts can coordinate these discussions and strategies with local Forest Service personnel, and also plan for long-term needs for high-quality wood that can be addressed with silvicultural treatments.

Federal funds for watershed and ecological restoration work are likely to become available. If they are administered through district-level contracts, **districts can be prepared to target long-term restoration contracts to local and regional wood products workers, and to assist in any necessary training for restoration workers**. Such training may or may not be coordinated by federal resource management agencies, but district personnel have valuable scientific expertise that they could contribute to any such training programs.

Payments to counties

The recommendation below is unlikely to come close to replacing lost timber receipts, but it might provide some additional revenue to counties that would out-last current and proposed mitigative payments from the federal government.

Fees for recreation and special forest product collection permits may be implemented or increased, and receipts shared with counties. Potential negative effects on these users should be considered, especially if former wood products workers and others who are bearing the largest share of the negative effects of the RMP will be affected. Districts cannot implement fees on their own; Congressional action would be needed, but districts have important knowledge to contribute to any such decisions.

Education and youth services

Reductions in federal timber receipts, combined with Ballot Measure 5, are negatively affecting schools and other services for children and youth. District residents are particularly concerned about the effects of unemployment, poverty, family stress, and education cuts on the children and young people in their communities. The BLM cannot replace any of these losses, but it can demonstrate its concern and take some actions to improve education and childrens' social environment in distressed communities.

As mentioned above, BLM personnel have valuable scientific expertise, which can benefit children as well as adults. Districts can **expand work with interested school districts and teachers to develop field trips; research, monitoring, and small restoration projects; and other educational opportunities on BLM lands.** Such projects could also be arranged with community and civic groups that include youth.

Districts could provide **employment and work-study opportunities** for youth from distressed families and communities, e.g., through summer Youth Conservation Corps-type programs or school-year internships. These should be paid positions, but should not substitute for employment of adults from these same communities. YCC-type groups could also include urban youth from the same district, if a mix of rural and urban workers would facilitate communication among people who may have quite different views of environmental issues and related socioeconomic concerns.

Economic development and diversification

Districts can **maintain contact with local and regional governments and economic development organizations** in order to better integrate BLM plans, such as recreation projects, with community strategies for development. Districts can ask and listen for ways the BLM could contribute to economic development efforts that may not have occurred to district personnel. Maintaining regular contact could also help to forestall conflicts over economic development projects that affect BLM lands, by permitting early discussion of any environmental or legal constraints on potential economic development projects.

Access to BLM lands

Road closures and other restrictions on access can affect many different groups of people, including recreationists, special forest product collectors, and Native Americans. Districts can **increase involvement**

of affected groups in deciding which roads to close and where to restrict access. In cases of critical wildlife habitat and severely deteriorating roads, choices may be limited, but groups may still be able to participate in making decisions and be allowed to question rationales and provide additional information that could alter decisions. In many situations, there might be several choices to make, e.g., which roads, trails, or areas to close; whether to obliterate some closed roads or maintain them as trails; where, when, why, and how to restrict access to fragile areas. Such discussions can also provide opportunities for user-groups with differing interests and opinions to develop some common goals for the lands they use, though this may not be an immediate outcome.

Culture of rural communities

In addition to the losses of jobs and income, many wood products workers and their communities feel that their way of life is under attack as a result of federal forest policies, but even more so from society at large, which they see perversely blaming loggers and millworkers for providing basic goods to the nation.

The BLM can help to affirm the culture of rural, timber-producing peoples. Some of the suggestions above, such as directing forest employment opportunities to rural residents, working with local youth, and most of all, talking and listening to local residents, are steps in this direction. The BLM can also continue or increase visible support to community landmarks and events such as local museums and logging shows, and work with communities that want to develop interpretive sites to reflect their cultural heritages. But perhaps most of all, as the BLM interprets and applies principles of ecosystem management, it can recognize and explain how people are fundamental parts of forest ecosystems, and how the health of one depends on the health of the other, as Robert Lee noted at the Forest Conference:

What we've learned [in the Pacific Northwest] and what we've learned around the world is that the security that people have in their community, in their families, in the tenure relationships they have, and that their children feel about their futures are key to healthy forests. This is where people learn to protect forests, to enhance them. This is where the knowledge is. This is where the creativity is (Richardson 1993a).

Meeting district information needs

In visits to districts and focus group discussions, it became apparent that District personnel did not, and probably could not, at current staffing levels, know in detail all that was happening on their lands, either regarding people or the resource. Rapidly changing uses such as special forest products collections present special difficulties to managers and scientists who do not know what people and resources were there several years ago, much less how they are changing each season around the district. The FEMAT report addressed necessary improvements to gathering, coordinating, and using biophysical and social data among resource management agencies (FEMAT 1993). What should be added, or reinforced, is that knowledge about BLM lands is not confined to the agencies and universities. The people who are using the lands may know particular areas in more detail than any agency personnel. Judging from public comment, local natural history, mycological, and botanical societies may be able to supply additional knowledge of the resource and might be recruited to cooperative work towards filling gaps in knowledge. Organized recreationists can also supply information about their uses, needs, and observations on BLM

lands. Some rural landowners and community groups are noting environmental changes, e.g., in fish runs, on adjacent BLM lands. Just as citizens and agencies can share decisions and responsibilities for resource planning and management, they can also share in the research and monitoring of the social and biophysical environments that provide information vital to responsible decision-making.

REFERENCES

- Ashton, P.G., and J.B. Pickens. 1990. Rural community stability: an evaluation of natural resource based economic activities and management on national forests. Unpublished paper. U.S. Department of Agriculture Forest Service, Washington, D.C.
- Barnard, J. 1993a. Immigration woes plague Northwest forest industry. *Seattle Times*, August 29, 1993, page B3.
- Barnard, J. 1993b. Timber workers want restoration jobs, survey shows. *Seattle Times*, July 13, 1993, page B3.
- Bay Area Chamber of Commerce. 1992. Coos Bay-North Bend-Charleston Bay Area development strategy. *The World*, August 7, 1992, page 2, Coos Bay, Oregon.
- Beebe, G.S., and P.N. Omi. 1993. Wildland burning: the perception of risk. *Journal of Forestry* 91(9):19-24.
- Blahna, D.J. 1990. Social bases for resource conflicts in areas of reverse migration. Pages 159-178 in Lee et al. 1990.
- Bray, M., and R.G. Lee. 1991. Federal forest revenue sharing with local governments in Washington, Oregon, and California. *The Northwest Environmental Journal* 7:35-70.
- Brown, B. 1991. Notes on social and economic transformations in southwest Oregon. Paper presented at Northwest Women's Studies Association Meeting, April 1991, Pullman, Washington.
- Brunelle, A. 1990. The changing structure of the forest industry in the Pacific Northwest. Pages 107-124 in Lee et al. 1990.
- Bureau of Governmental Research and Service. 1992. Oregon county fiscal report, fiscal year 1991. University of Oregon, Eugene, Oregon.
- Carroll, M.S., and R.G. Lee. 1990. Occupational community and identity among Pacific Northwestern loggers: implications for adapting to economic changes. Pages 141-156 in Lee et al. 1990.
- CCAGED (Coquille Citizens Advisory Group for Economic Development). 1991. Coquille strategic plan. CCAGED and Oregon Department of Economic Development, Coquille, Oregon.
- Conway, F.D.L., and G. Wells. In press. Timber in Oregon: history and projected trends. Oregon State University, Corvallis, Oregon.
- Cook, A.K. 1993. Changes in employment and poverty: differences between timber-dependent and metro areas in western Washington. Paper presented at Pacific Sociological Association Meetings, April 2, 1993, Portland, Oregon.

- Cortner, H.J., and M.A. Shannon. 1993. Embedding public participation in its political context. *Journal of Forestry* 91(7):14-16.
- Drielsma, J.H., J.A. Miller, and W.R. Burch, Jr. 1990. Sustained yield and community stability in American forestry. Pages 55-68 in Lee et al. 1990.
- E.D. Hovee and Company. 1990. Review of strengths, weaknesses, opportunities, and threats for the transition communities of Oregon. Report to the Oregon Economic Development Department, March 1990, Salem, Oregon.
- Ehinger, P. 1993. Forest products industry report on mill closures, operations, and other related information. P.F. Ehinger and Associates, Eugene, Oregon.
- FEMAT (Forest Ecosystem Management Assessment Team). 1993. Forest ecosystem management: an ecological, economic, and social assessment. U.S. Government Printing Office 1993:793-071, Washington, D.C.
- Firey, W. 1960. Man, mind, and land: a theory of resource use. Greenwood Press, Westport, Connecticut.
- Fitchen, J.M. 1993. The redistribution of poverty: poor people moving from city to country. Paper presented at the 56th Annual Meeting of the Rural Sociological Society, August 7-10, 1993, Orlando, Florida.
- Force, J.E., and K.L. Williams. 1989. A profile of national forest planning participants. *Journal of Forestry* 87(1):33-38.
- Fortmann, L., and P. Starrs. 1990. Power plants and resource rights. Pages 179-194 in Lee et al. 1990.
- Franklin, J.F., and C.T. Dyrness. 1973. Natural vegetation of Oregon and Washington. Oregon State University Press, Corvallis, Oregon.
- Gale, R.P. 1991. Forest resource-dependent communities and new forestry: how wide the welcome mat in the Pacific Northwest? *The Northwest Environmental Journal* 7:7-33.
- Greber, B.J. 1993. Impacts of technological change on employment in the timber industries of the Pacific Northwest. *Western Journal of Applied Forestry* 8(1):34-37.
- HCRT (Harrisburg's Community Response Team). 1991. Harrisburg strategic plan. HCRT and Oregon Department of Economic Development, Harrisburg, Oregon.
- Hockman, E.L. 1991. Affidavit in re. application by the Bureau of Land Management for an exemption under the Endangered Species Act for 44 timber sales. ESA 91-1. Office of Hearings and Appeals, U.S. Department of Interior, Oregon.
- Humphrey, C.R. 1990. Timber-dependent communities. Pages 34-60 in A.E. Luloff and L.E. Swanson, editors. *American rural communities*. Westview Press, Boulder, Colorado.

- ISEIST (Interagency SEIS Team). 1993. Draft supplemental environmental impact statement on management of habitat for late-successional and old-growth forest related species within the range of the northern spotted owl. U.S. Government Printing Office 1993:793-234/82403 Region 10, Portland, Oregon.
- Kaufman, H.F., and L.C. Kaufman. 1990. Toward the stabilization and enrichment of a forest community. Pages 27-39 in Lee et al. 1990. (A condensed version of their 1946 report to the U.S. Forest Service.)
- Lee, R.G. 1990. Sustained yield and social order: Pages 83-94 in Lee et al. 1990.
- Lee, R.G. 1991. Four myths of interface communities. *Journal of Forestry* 89(6):35-38.
- Lee, R.G. 1993. From obligation to opportunism: community decline and spotted owl protection in Pacific Northwest forests. Paper presented at the Annual Meeting of the Rural Sociological Society, August 7-10, 1993, Orlando, Florida.
- Lee, R.G., D.R. Field, and W.R. Burch, Jr., editors. 1990. *Community and forestry: continuities in the sociology of natural resources*. Westview Press, Boulder, Colorado.
- Lee, R.G., P. Sommers, H. Birss, C. Nasser, and J. Zientek. 1991. Social impacts of alternative timber harvest reductions on federal lands in O&C counties. College of Forest Resources and Northwest Policy Center, University of Washington, Seattle, Washington.
- Macdonald, S. 1993. The mushroom rush of '93 is on. *Seattle Times*, October 30, 1993, page A1.
- Machlis, G.E., and J.E. Force. 1988. Community stability and timber-dependent communities. *Rural Sociology* 53:220-234.
- Machlis, G.E., J.E. Force, and R.G. Balice. 1990. Timber, minerals, and social change: an exploratory test of two resource dependent communities. *Rural Sociology* 55:411-424.
- Mahan, M. 1993. The Klamath economy: May 1993. Oregon State Employment Service, Salem, Oregon.
- Marchak, P. 1990. Forest industry towns in British Columbia. Pages 95-106 in Lee et al. 1990.
- Marcin, T.C. 1993. Demographic change: implications for forest management. *Journal of Forestry* 91(11):39-45.
- MCRT (Mapleton Community Response Team). 1991. Mapleton strategic plan. MCRT and Oregon Department of Economic Development, Mapleton, Oregon.
- Molina, R., T. O'Dell, D. Luoma, M. Amaranthus, M. Castellano, and K. Russell. 1993. Biology, ecology, and social aspects of wild edible mushrooms in the forests of the Pacific Northwest: a preface to managing commercial harvest. U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station General Technical Report PNW-GTR-309, Portland, Oregon.

- Muth, R.M. 1990. Community stability as social structure: the role of subsistence uses of natural resources in southeast Alaska. Pages 211-227 in Lee et al. 1990.
- Nash, R. 1982. Wilderness and the American mind, 3rd edition. Yale University Press, New Haven, Connecticut.
- OBC (Oregon Business Council). 1993. Oregon values and beliefs: summary. Portland, Oregon.
- OCRT (Oakridge Community Response Team). 1991. Oakridge strategic plan. OCRT and Oregon Department of Economic Development, Oakridge, Oregon.
- OED (Oregon Employment Division). 1992a. Business and employment outlook, volume 1. State of Oregon, Salem, Oregon.
- OED (Oregon Employment Division). 1992b. Lumber and wood workers two-year Oregon automated follow up labor market profile. December 9, 1992. State of Oregon, Salem, Oregon.
- Oregon International Port of Coos Bay. 1993. Waterbourne statistics annual report: 1992. Coos Bay, Oregon.
- Peterson, L. 1979. Local socio-economic trends and public forest land management: a social assessment of Eugene District, BLM. Unpublished paper. U.S. Department of Interior, Bureau of Land Management, Eugene District, Eugene, Oregon.
- Phelps, B.M. 1992. Community stability and the USDA Forest Service: a socioeconomic methodology exploring community structural diversity. Master's thesis. State University of New York, Syracuse, New York.
- Pinchot, G. 1910. The fight for conservation. University of Washington Press, Seattle, Washington.
- Pittman, A. 1993. The diploma struggle. What's Happening, August 5, 1993, page 1, Eugene, Oregon.
- Ploch, L.A. 1980. Effects of turnaround migration on community structure in Maine. Pages 291-311 in Brown, D.L., and J.M. Wardwell, editors. New directions in urban-rural migration: the population turnaround in rural America. Academic Press, New York, New York.
- PPEDD (Pacific Power Economic Development Department). 1990. Lebanon Community Development Task Force report and 1990-91 action plan. Lebanon, Oregon.
- PPEDD (Pacific Power Economic Development Department). 1991. Sweet Home Economic Development Group 1991-92 action plan. Sweet Home, Oregon.
- Richardson, C.W. 1993a. President Clinton's forest conference, April 2, 1993 proceedings: a content summary. Appendix VII-A in FEMAT 1993.
- Richardson, C.W. 1993b. Differences in ecological cognition among forest managers: effects of childhood experience and institutional affiliation. Master's thesis. University of Washington, Seattle, Washington.

- Richardson, C.W., and D. Deagan. 1993. Post-Forest Conference public input: a summary of policy issues. Appendix VII-B in FEMAT 1993.
- Schallau, C. 1989. Sustained yield versus community stability: an unfortunate wedding? *Journal of Forestry* 87(9):16-23.
- Schallau, C. 1990. Community stability: issues, institutions, and instruments. Pages 69-81 in Lee et al. 1990.
- Schallau, C.H., and R.M. Alston. 1987. The commitment to community stability: a policy or shibboleth? *Environmental Law* 17:429-481.
- Schlosser, W.E., K.A. Blatner, and R.C. Chapman. 1991. Economic and marketing implications of special forest products harvest in the coastal Pacific Northwest. *Western Journal of Applied Forestry* 6(3):67-72.
- Seattle Times. 1993a. 40% fail simple reading tasks. September 9, 1993, page A7.
- Seattle Times. 1993b. U.S. Forest Service: what do they do now? October 5, 1993, page B4.
- Seattle Times. 1993c. Forest Service timber payments to NW states show big decline. September 20, 1993, page B6.
- Seattle Times. 1993d. Oregon schools feeling pinch of property tax limit. September 6, 1993, page B3.
- Seidel, K. 1993. Demographic and economic characteristics of Oregon's timber-dependent communities. *Oregon Profiles*, June 1993, Oregon State University Extension Service, Corvallis, Oregon.
- Sessions, J., D.N. Johnson, J. Beuter, B. Greber, and G. Lettman. 1991. Timber for Oregon's tomorrow: the 1989 update. Oregon State University, Corvallis, Oregon.
- Shands, W.E. 1991. Problems and prospects at the urban-forest interface. *Journal of Forestry* 89(6):23-26.
- Shannon, M.A. 1990. Building trust: the formation of a social contract. Pages 229-240 in Lee et al. 1990.
- Shannon, M.A. 1991. Resource managers as policy entrepreneurs: governance challenges of the urban-forest interface. *Journal of Forestry* 89(6):27-30.
- Society of American Foresters. 1989. Report of the Society of American Foresters National Task Force on Community Stability. Society of American Foresters Resource Policy Series, Bethesda, Maryland.
- Steel, B.S. 1993. Public values concerning the environment and forestry: an international, national, regional and local community perspective. Unpublished paper prepared for FEMAT. Washington State University, Vancouver, Washington.

- USBC (U.S. Bureau of the Census). 1992. Statistical abstract of the United States, 112th edition. U.S. Department of Commerce, Economics and Statistics Administration, Washington, DC.
- USDAFS (U.S. Department of Agriculture Forest Service) Pacific Northwest Region. 1965. Special forest products: 1964 harvesting report Oregon and Washington. U.S. Government Printing Office 989-679, Portland, Oregon.
- USDIBLM (U.S. Department of Interior Bureau of Land Management). 1991. BLM facts: Oregon and Washington. USDIBLM, BLM-OR-AE-92-03-1792, Portland, Oregon.
- USDIBLM (U.S. Department of Interior Bureau of Land Management) Klamath Falls Resource Area Office. 1992. Klamath Falls Resource Area draft resource management plan and environmental impact statement. U.S. Government Printing Office 1992:691-114/61612 Region 10, Portland, Oregon.
- USDIBLM (U.S. Department of Interior Bureau of Land Management) Medford District Office. 1992. Medford District draft resource management plan and environmental impact statement. U.S. Government Printing Office 1992:691-114/61607 Region 10, Portland, Oregon.
- USDIBLM (U.S. Department of Interior Bureau of Land Management) Oregon State Office. 1992. Executive summary: western Oregon draft resource management plans/environmental impact statements. U.S. Government Printing Office 1992:691-114/61615 Region 10, Portland, Oregon.
- Waggener, T.R. 1977. Community stability as a forest management objective. *Journal of Forestry* 75(11):710-714.
- Warren, K. 1992. Role-making and coping strategies among women in timber-dependent communities. Master's thesis. University of Washington, Seattle, Washington.
- Weeks, E.C. 1990. Mill closures in the Pacific Northwest: the consequences of economic decline in rural industrial communities. Pages 125-139 in Lee et al. 1990..
- Western Forester. 1993. Special forest products benefit economy. *Western Forester* 38(7):15.
- Wetter and Associates. 1993. Visitor industry status report and market analysis, Linn County, Oregon. Second draft, June 28, 1993. Prepared for Linn County Tourism Coalition by Michael Wetter and Associates.
- Wilderness Society. 1992. From dreams to realities: diversifying rural economies in the Pacific Northwest. The Wilderness Society, Washington, D.C.

**BLM Library
Denver Federal Center
Bldg. 85, OC-521
P.O. Box 25047
Denver, CO 80225**

